AN EMPIRICAL STUDY OF THE R-FACTOR AND ITS IMPACT ON SOCIAL AND EMOTIONAL LEARNING, SCHOOL CLIMATE, AND STUDENT DISCIPLINE

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Abstract

K-12 public schools have increasingly implemented social and emotional learning (SEL) programs to improve student academic and life outcomes. To date, over 100 schools have purchased a framework created by Focus 3 called the R-Factor. The program was created for business and there is no research of its effectiveness in the school setting. This mixed methods study occurred in a Midwestern rural school. It examined how training staff and students in the R-Factor impacts student emotional intelligence (EQ), —a driver of SEL— school climate, and student discipline. To evaluate student EQ, 892 students in grades 3-12 took a Six Seconds SEI-YV EQ pretest and 905 students completed a posttest. To analyze school climate, 183 staff members took a pretest and 171 staff took a posttest Six Seconds Educational Vital Signs (EVS) survey; 10 staff participated in a semi-structured interview. Student referral data (n = 1,121) from the 2019-20 school year prior to R-Factor implementation were compared to the 2020-21 school year (n = 1,048) using descriptive statistics. Discipline analysis was also derived from a semi-structured interview with three principals in charge of discipline. Results of the study show that R-Factor does not increase nor decrease student EQ. The quantitative data did not prove R-Factor increases staff opinion of school climate, but qualitative analysis revealed an increase. R-Factor lowered student disciplinary referrals in both the quantitative and qualitative evaluation. Implications of these findings are discussed and recommendations are provided for school leaders who are considering implementation of R-Factor in their school.

Dedication

I dedicate this dissertation to my loving family who has always encouraged and supported me to be my best. My grandfather, Robert Preston, and my father, Larry Underwood, taught me that one's reputation is earned through consistent hard work and dedication. My grandmother, Mary Preston, and my mother, Cynthia Underwood, modeled loyalty, caring, and the importance of being a lifelong learner. Our parents selflessly put their children ahead of their own needs so that Kelly, Luke, and I could seek higher education and professional careers; they continue to provide countless opportunities for their children and grandchildren.

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Table Of Contents

List Of Tables

List Of Figures

Chapter I. Introduction

Background of the Problem

The American public education system is often criticized for not preparing students to compete in college and in the workforce. It has been noted that United States students do not fare well when compared internationally on standardized tests. Seventy-two total countries participated in the 2015 triennial Program for International Student Assessment (PISA). Out of the 35 Organization for Economic Cooperation and Development (OECD) countries, U.S. 15 year-old students ranked 31st in mathematics, 19th in science, and 20th in reading literacy (OECD, 2016). Math scores were below average while science and reading fell in the average range (OECD, 2016). The most recent 4-year graduation rate for public high school students in 2015-16 was 84 percent and the status of youth dropout rates—16 to 24-year-olds who are not enrolled in school and have not earned a high school credential—stood at 6.1 percent in 2016 (McFarland et al., 2018). Graduates are also not prepared for success in college. The Ohio Department of Higher Education reports that 30% of first-time Ohio public university students in 2016-17 required remediation in both math and English (*2017 Ohio Remediation Report*). Furthermore, the *ACT National Profile Report* (2018) indicated that only 27% of American students in the class of 2018 met all four college readiness benchmarks in English, mathematics, reading, and science (p. 7), a number that has remained flat over the past four years.

Despite disappointing academic progress and disengaged students, federal and state policies continue to focus on standardized testing as a way to improve academic achievement. The testing culture does not motivate students. “By high school as many as 40%–60% of students become chronically disengaged from school” (Klem & Connell, 2004, p. 1). The American education system uses quantitative data derived from common assessments to evaluate student progress, teacher quality, and to rank school performance. According to Grinell and

Rabin (2013), "Unfortunately, just about anything one might think of to describe or measure via the use of standardized tests or other quantitative data-gathering techniques is at best a weak proxy for those deeper things we ought to care about as educators" (p. 753). The over-emphasis on test scores has led to a culture of teaching to the test and de-emphasizing courses that engage students and promote higher-level thinking. In a Center on Education Policy (CEP) report written by Rentner et al. (2006), the researchers indicate that a 2005-06 CEP survey found that "71% of districts reported reducing instructional time in elementary schools for one or more subjects in order to make more time for reading and math" (p. 95). Schools reported limiting instruction in social studies, science, art, music, and physical education to focus on math and reading, subjects typically evaluated through standardized tests (CEP, 2006).

Perhaps more troubling than student academic performance is that graduates lack the personal, non-academic skills required to maintain mental health, relationships and eventual success in the workplace. A Bureau of National Affairs survey (2018) of corporate, professional service, and nonprofit respondents, indicated that almost 40% of corporations and nearly half of academic institutions said new hires lack the soft skills—emotional intelligence, or social and emotional skills— they need to perform at a high level and respondents noted that recruits do not meet expectations in emotional intelligence, negotiation and persuasion, and complex reasoning (Bureau of National Affairs, 2018, p. 2). Despite the skill-gap, "the labor market increasingly rewards social skills. Between 1980 and 2012, jobs requiring high levels of social interaction grew by nearly 12 percentage points as a share of the U.S. labor force" (Deming, 2017, p. 1). The National Association of Colleges and Employers (NACE) *Job Outlook 2018* survey indicates that employers place high value on soft (social) skills, ranking problem solving, team work, and communication as the as top three desirable skills.

Most experts agree that cognitive skills—thinking, reasoning, or remembering (Merriam-Webster, n.d.)—lead to academic and labor market success. As Lleras (2008) states, "students who graduate from high school with higher cognitive performance are more likely to both attend and complete college, which in turn, translates into higher earnings in later adulthood" (p. 889). Standardized tests measure students' cognitive skills, but there is a growing amount of research that suggests that non-cognitive skills, or soft skills, may be just as important as cognitive ability for academic achievement and success in life. Chetty et al. (2011), Heckman & Rubinstein (2001), Lindquist & Vestman (2011), and Mueller & Plug (2006) found that non-cognitive skills are more predictive of long-term outcomes than test scores (as cited in Bjorklund-Young, 2016, p. 2). These skills are "universally valued across all cultures, religions, and societies" and "latent non-cognitive skills, corrected for schooling and family background effects, raise wages through their direct effects on productivity as well as through their indirect effects on schooling and work experience" (Heckman et al., 2006, p. 3). Social and emotional learning (SEL) is a term commonly associated with non-cognitive skills in the educational setting. Research suggests that schools should promote non-cognitive, SEL development in order to increase academic achievement while in school and promote career success after graduation. One of the most noted meta-analyses on social and emotional learning revealed an 11 percentile academic gain as the result of SEL programming (Durlak et al., 2011). Sklad et al. (2012) assert that the teaching of social and emotional skills is a primary function of schools, in addition to academic skills (p. 892).

Government policy has traditionally placed little emphasis on non-cognitive development. "Since the mid-1980s, test score-based accountability has dominated American public education. This movement took on the force of federal law in 2001 with the No Child Left

Behind Act, as every state in the country administered standardized tests to measure student and school performance" (Farrington et al., 2012, p. 72). However, the federal Every Student Succeeds Act (ESSA) of 2015, gave states more flexibility in defining student and school success and more responsibility for designing their accountability systems, which must include at least one non-academic measure. To support continuous improvement, ESSA (2015) allowed states to include other indicators such as student engagement, student access to advanced coursework, postsecondary readiness, school climate and safety, and social and emotional learning.

The recent policy changes supporting non-cognitive development have been promoted through social and emotional learning initiatives. The Collaborative for Academic, Social, and Emotional Learning (CASEL) is a leading organization in advancing SEL in education. CASEL's advocacy has led to an increase of states adopting SEL standards. By September 2018, 14 states had pre-K through 12th grade standards, 11 had pre-K through early elementary, and 21 provide tools and resources to support SEL implementation (Dusenbury et al., 2018). Ohio, where the present study occurred, has pre-K through 3rd grade SEL standards and the state recently adopted *Each Child Our Future Ohio Strategic Plan for Education: 2019-2024*, a strategic plan that includes social-emotional learning as one of its four main learning domains.

Although there has been a shift in policy to include other measures in the accountability system, public education continues to disproportionately focus on standardized tests and cognitive development. Disengaged students are graduating un-prepared to compete in college and career, while the research clearly indicates that non-cognitive development through social and emotional learning interventions cultivates skills that lead to academic and career success. The academic gains also have a longitudinal effect. For example, Jones, Greenberg, & Crowley

(2015) found that kindergarteners with higher prosocial (SEL) skills at 13 to 19 years' follow-up were more likely to graduate high school, complete a college degree, obtain stable employment, and be employed full-time; while in school, they were less likely to require special education services or to repeat a grade.

Research indicates that SEL provides benefits in other areas as well. Sklad et al. (2012) found that school based social, emotional, and or behavioral programs positively affect attitudes toward self, and prosocial behavior and reduce antisocial behavior. Students with greater social-emotional competence also experience fewer mental health difficulties (Panayiotou et al. 2019). Taylor et al. (2017) found that SEL interventions affect positive behavior, guard against negative outcomes, and students experience stronger emotional assets and higher well-being at follow-up; these benefits are consistent for all demographic groups and for both domestic and international students. The aforementioned Jones et al. (2015) longitudinal study, linked prosocial skills with positive mental health and found that prosocial skills were inversely predictive of police involvement or ever being detained, reduced the risk of later substance abuse of alcohol or marijuana, and predicted the number of years on medication for emotional or behavioral issues through high school.

Despite the varied positive benefits of SEL implementation, states have been slow to adopt K-12 SEL standards. However, research shows that proactive districts can successfully deliver SEL programs using existing school staff during the regular school day (Durlak et al., 2011). The school-wide implementation of social and emotional learning involving all stakeholders modeled through the curriculum is the most effective SEL approach, and a quality SEL program leads to better student engagement (Yang et al., 2018). Teachers may, however, view SEL as "one more thing to do" because school initiatives often operate in independent,

fragmented silos. For example, many states including Ohio, have adopted policies requiring the implementation of Positive Behavioral Intervention and Supports (PBIS) to create learning environments that enhance the academic and social behavioral outcomes for students. The task for educational leaders is to align these existing programs with SEL initiatives.

Clarifying terminology and aligning language across frameworks is a foundational challenge and confusing aspect of the SEL movement. Osher et al. (2016) report that there is no clear and common language for practitioners and "the generic use of the term non-cognitive to describe factors that include cognitive components, while grounded in history of behavioral economics, can be confounding" (p. 665). Furthermore, SEL is often categorized under the term "non-cognitive skills," which may downplay the significance in comparison to "cognitive factors" (Farrington et al., 2012). As is discussed later, educators and researchers use SEL interchangeably in a variety of other frameworks, adding to the difficulty of creating a universal understanding of SEL.

R-Factor creates a common language, or shared set of definitions, beliefs, behaviors, and outcomes, that drives a shared culture among staff and students, enabling practitioners to approach SEL with clarified terminology. The goal of this study is not to address all of the gaps in the research, but to clarify language and to investigate how the implementation of a school-wide program (R-Factor), delivered by school staff, aligns with other school efforts and impacts student SEL development, school climate, and student discipline. According to Focus 3 (2018), the R-Factor is a systematic behavior toolbox, or set of skills, that teaches individuals to use discipline-driven responses to elicit desired outcomes. Tim Kight developed the program and it gained significant popularity in the 2013-14 college football season when the Ohio State Buckeyes utilized the R-Factor on its way to winning the national title. Numerous companies and

college teams across the United States now use Kight's program and it has recently gained popularity among public school districts. The system teaches school personnel and students to respond to social events with the appropriate emotional response (Focus 3, 2018).

Rationale & Significance of the Study

Although there is a tremendous amount of on-going research to support the need for social and emotional development in our youth, several gaps remain as states have been slow to adopt standards and educational leaders continue to struggle with implementation. Osher et al. (2016) identify gaps in the research:

> (a) the need for practical, reliable, and valid assessments of specific SEL skills; (b) limited knowledge about effective leadership practices to promote teachers' buy-in and quality of implementation; (c) limited knowledge about how to better align SEL with other school efforts; (d) a need to clarify terminology and align language and frameworks; and (e) a need to translate research into practice, among other issues" (p. 663).

Teachers and administrators constantly seek ways to motivate students and prepare them to compete globally in the technologically advanced 21st century. In an era of standardized testing and school accountability, it has become increasingly difficult to engage students in their education. There is a growing need to determine how to educate the whole child and not only attend to their academic needs, but to their non-cognitive, social-emotional needs as well. Students could benefit from this study when educational leaders integrate the findings into policies and procedures. Teachers can use the results to improve delivery and integration of SEL into their daily practices. Administrators can use the findings to plan staff professional development and school-wide SEL programming and curriculum that complements other district

initiatives. For example, Cook et al. (2015) found promising support for combining SEL with PBIS and Barrett et al. (2018) suggests that PBIS provides a framework for promoting social and emotional outcomes for students. This study is beneficial to school leaders because it explores how R-Factor, a program that promotes SEL skills, can function alongside other initiatives, such as the PBIS framework, which is currently operating in many schools.

Durlak et al., (2011) outlined four SAFE (sequenced, active, focused, and explicit) recommendations for quality SEL programming (p. 418). Yet, there has been little research on how to apply school-wide programs that promote teacher buy-in and quality of implementation. Yang et al., (2018) found that teacher-student relationships and student-student relationships lead to better student engagement when combined with school-wide SEL programs (Yang et al., 2018). Pre-packaged programs with a broader focus may yield better results (Coelho, 2017). R-Factor is one such pre-packaged program that staff first master and apply the concepts in their own interactions before teaching it to students. The program fosters teacher-student relationships and creates a common language for developing skills to respond to events through positive, social behavior. R-Factor has not been subjected to rigorous study; the aim of the current research is to explore how the school-wide implementation of the program impacts the overall SEL development of students.

This study may help k-12 school superintendents and principals make more informed decisions about selecting an SEL program. More specifically, it could help administrators determine if the R-Factor program improves student SEL skills and has an impact on school climate and disciplinary referrals. This may lead to an SEL program that is more effective for their schools. As a result of the study, teachers may be more willing to provide student SEL instruction. The study may serve as motivation for all school staff, including support personnel,

to participate in district-wide initiatives. Students may benefit from increased SEL skills, which could result in positive individual outcomes while in school and after graduation.

Purpose of Study

The purpose of this study is to determine if the implementation of R-Factor has any effect on student SEL skills, school climate, and student discipline. Research indicates that the development of social and emotional skills is paramount for student success. The R-Factor is a district-wide program that is delivered by school staff to foster student SEL growth. After a Mid-Western, rural school district staff receives a year of R-Factor training and then teaches the concepts to the students the following school year, the study utilizes a mixed-methods approach to determine the overall effectiveness of the program. The study uses a pre and post quantitative Six Seconds Emotional Intelligence Assessment Youth Version (SEI-YV) to measure SEL skills of students in grades 3-12 and a pre and post quantitative Six Seconds Education Vital Signs survey to measure staff opinion of school climate as a result of the R-Factor. The study also employs a qualitative group interview to further understand staff opinion of school climate. Additionally, to determine if the R-Factor has any effect on student discipline, the study quantitatively analyzes disciplinary referrals before and after program implementation and conducts a qualitative group interview with principals in charge of discipline.

Theoretical Framework

Cognitive ability alone cannot ensure student success in school and in life thereafter. The development of interpersonal and intrapersonal skills is essential. As such, the theoretical frameworks that grounded this study are emotional intelligence (EQ) theory and social emotional learning (SEL). Mayer explains that the foundations of emotional intelligence can be traced back 2,000 years, but it did not progress as a theory until the 1900's. Thorndike's social intelligence

theory of the 1920's gained attention, but it did not endure because it was not based in science. As recently as the 1960's, many still thought that intelligence, and therefore success, was solely based on cognitive aptitude (Mayer, 2001). The main shift in research came with Sternberg's (1985) practical intelligence and Gardner's (1993) multiple intelligences, which together established that intelligence, emotion, and social relations were related (Elias, et al., 2008). Salovey and Mayer (1990) eventually summarized this concept as emotional intelligence or "the ability to monitor one's own and other's feeling and emotions to discriminate among them and to use this information to guide one's thinking and actions" (p 189).

Three popular EQ theories have emerged. According to Mayer et al. (2004), Mayer and Salovey's Ability Model of Emotional Intelligence views emotional intelligence as a type of intelligence relatively independent of personality traits. Conversely, Bar-On's (1997) conceptual model of emotional intelligence includes non-ability factors, a combination of mental abilities, and those qualities that are personality based. Daniel Goleman's Theory of Emotional Intelligence (1995) popularized EQ and sparked national interest in the topic. His theory expanded previous definitions and blended it with skills and characteristics (Mayer, 2001) and included personal attributes (Livingstone & Day, 2005). Despite criticism of Goleman from Mayer et al. (2008) for creating a confusing mixed model of emotional intelligence and trait theory, Goleman's theory inspired the creation of the social and emotional learning movement.

Multiple SEL frameworks have emerged out of emotional intelligence theory. The SEL theoretical framework that formed the basis for this study is from arguably the most well-known framework, the Collaborative for Academic, Social, and Emotional Learning (CASEL). CASEL's framework, and thus the theoretical framework for this research, is based on the need for schools to develop more than cognitive and academic abilities alone. Schools should foster

SEL development, which is achieved by focusing on CASEL's five SEL competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision making.

The study posits that the implementation of a district-wide R-Factor program, aligned with the CASEL framework, may impact student EQ and overall SEL skills. Additionally, R-Factor programming that influences overall student EQ and SEL skills has the potential to affect school climate and student discipline. CASEL's broad framework serves as a resource for implementing school-wide SEL (Osher et al., 2016). Based on the research of Jones and Bouffard (2012), the school in this study "integrates the teaching and reinforcement of SEL skills (through the R-Factor program) into missions and daily interactions with students" (p. 3) and strives to make it part of academic instruction and school climate. Jones and Bouffard (2012) also suggest vertical alignment—developing skills across grade level—and horizontal alignment—developing skills across contexts and environments (Jones & Bouffard, 2012), which again are characteristics of the school in this research. Programs are also more effective when support extends beyond the classroom (Durlak et al., 2011), which is why all school staff are involved in the R-Factor SEL training. The research also ascribes to CASEL's SAFE quality SEL implementation guidelines: sequenced, active, focused, and explicit (Durlak et al., 2011).

Research Questions

Student achievement and success after graduation are linked to strong social and emotional skills. Public schools are increasingly faced with the challenge of not only providing an academic education, but also developing the whole child. Few argue that social and emotional development is critical to success, but there is on-going research about how best to implement a quality SEL program. This study seeks to answer the following questions:

1. How does integration of the R-Factor program impact student social and emotional learning skills?
2. How does training a school staff member in R-Factor influence their opinion of school climate?
3. Does the R-Factor have any effect on student disciplinary referrals?

Definition of Terms

The major terms that will be investigated within this study are emotional intelligence (EQ), social and emotional learning (SEL), the R-Factor, school climate, and disciplinary referrals. They are defined for this study as follows:

Emotional Intelligence. This study uses Salovey and Mayer's (1990) definition of emotional intelligence, "The ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p. 189).

Social and Emotional Learning. "The process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions" (CASEL, n.d.).

R-Factor. A framework created by Focus 3 and used by corporations, organizations, college athletic teams, and public schools across the United States to teach individuals how to respond to events in a discipline-driven manner based on a common language and a shared culture (Kight, 2019).

School Climate. The National School Climate Council (2007) explains that, "School climate is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" (p. 4).

School Culture. "What people believe, how they behave, and the experience their behavior produces for others" (Kight, 2019, p. 1).

Disciplinary Referral. For the school district involved in this study, disciplinary referrals are official reports that staff members make to the principal in the respective building who is in charge of discipline. These citations are issued electronically via email or given to the principal in hard copy. Referrals are only included in the study if the student broke a rule written in the board of education adopted student code of conduct and the principal took action by issuing some form of punishment for the violation and recorded the referral in the school district student information system.

Subjectivity & Researcher Positionality

There is inherent bias in choosing a research design. This study utilized a mixed methods approach, collecting both quantitative and qualitative data. The researcher chose a mixed-methods research design based on his pragmatist, interpretivist, and phenomenological perspectives. The researcher has long believed that the role of public education should be more than providing a quality academic education, but to also develop the whole child for success in life after graduation. The researcher was vaguely aware of the term social and emotional learning, but had not investigated it on a deep level until he was approached by a group of business and community leaders in 2015. At the time, the researcher was serving as the high school principal at a Mid-Western rural school. The community group leader considered himself

a self-taught expert in the field of emotional intelligence and social and emotional learning. He believed strongly in Daniel Goleman's work and was convinced that SEL could improve many of the challenges facing the community including the lack of a dedicated labor force, poor parenting skills, and drug problems. He asserted that SEL could also help the district improve performance on state standardized assessments, a claim that he supported by the Durlak et al. (2013) meta-analysis that revealed an 11-percentile academic gain. Although the community leader was passionate, he was described as pushy and abrasive. Therefore, when the leader encouraged the former superintendent of the Mid-Western rural school to adopt an SEL plan, the superintendent provided examples of district work that resembled SEL and then separated the school from the community group.

When the researcher assumed the role of superintendent in 2017, the group quickly called for a district-wide SEL initiative. By this time, the researcher had started reading the literature and was convinced that SEL could lead to positive outcomes for students and the district. However, the researcher had also learned that there is disagreement in the field about what fits the definition of SEL and what works universally in all districts (Osher, et al., 2016). At about this same time in the spring of 2018, the Ohio Department of Education was preparing to release its new strategic plan, *Each Child Our Future,* and it specifically lists SEL as one of its Four Equal Learning Domains. Also, during this time period, the researcher attended a conference where Hilliard City Schools Superintendent, John Marschhausen, Ph.D., discussed his district's work on building student SEL skills through the R-Factor program. Furthermore, in August 2018, the researcher and his administrative team attended a one-day professional development session led by Tim Kight that focused on implementing R-Factor in public schools. Using

resources from casel.org, the researcher continued to study implementation of SEL programs and how the district could use R-Factor.

Research suggests that teachers and other school personnel can effectively implement SEL programs and that SEL is successful at all levels (elementary, middle, and high school) and in a variety of settings including urban, suburban, and rural (Durlak et al., 2011). Numerous studies as well as casel.org, list a variety of programs that build SEL. However, there is a chance of experience bias, because to the researcher's knowledge, no study has been performed to date on how training staff and students in the R-Factor program influences SEL growth and student outcomes. Nonetheless, this created an opportunity to utilize the program and to study its effects.

In the second semester of the 2018-19 school year, the Mid-Western rural school district started the R-Factor program. As the superintendent, the researcher obviously has bias because he has a vested interest in the success of the program, especially when one considers that the district provided a substantial investment of nearly $38,500 for implementation. A local business donated $10,000 to support R-Factor implementation and an additional $8,250 was reimbursed through the sharing of training costs with a local school district, bringing the total district investment to $20,250. The researcher also believes that SEL is a crucial part of the education process and is vital for developing students' 21st Century skills. He has a strong desire for the research to benefit the district and to inform other administrators and teachers of best SEL implementation practices to improve student achievement.

To mitigate potential bias, the research design ensured that all staff and student responses were kept confidential. The study used valid and reliable online instruments to collect and score survey responses so that the researcher could not influence the results. A t-test statistical formula was used to analyze the data. Student names were omitted from all published information. No

staff names were collected with the data so that participants could not be connected to their responses. This ensured that participants could speak freely without fear of repercussions from the researcher as superintendent of the district. Staff members were informed that participation in focus group interviews was voluntary and had no impact on their compensation or employment status. The researcher utilized several rounds of coding the qualitative data to assign themes and member checks to ensure accuracy. All available data was collected and analyzed without prejudice and findings were reported, regardless of their implications.

Chapter II. Literature Review

In a response to the ever-increasing challenges that schools face to prepare students for success in a complicated world, the term social and emotional learning (SEL) was first introduced by a group of educators and researchers at a Fetzer Institute meeting in 1994 (Elias et al., 1997; Greenberg et al., 2003). At the time, schools were being flooded by prevention and youth-development programs designed to address a variety of issues such as bullying, character, drugs, violence, and sex education and the programs often came in the form of short-term, piecemeal initiatives that were not integrated into the academic curriculum (Weissberg et al., 2015). Thus, SEL began as a conceptual framework to promote social and emotional needs of students and to address the fragmentation of school efforts to meet those needs (Elias et al., 1997; Greenberg et al., 2003; Weissberg et al., 2015). At the same Fetzer Conference in 1994, organizers established the Collaborative for Academic, Social, and Emotional Learning (CASEL) (Greenberg et al., 2003), an organization that remains committed to the advancement of evidence-based SEL for preschool through high school.

Since 1994, the SEL movement has exploded and numerous SEL programs have been created to deliver the content in K-12 schools. The R-Factor is one program that many schools have turned to for developing student SEL skills. It was created by Tim Kight and his company, Focus 3. The R-Factor was originally designed for business and industry, but it has been adapted for other settings. The program gained widespread popularity after the release of the *New York Times* bestselling book, *Above the Line: Lessons in Leadership and Life from a Championship Program*, a book written by the Ohio State football coach Urban Myer and author Wayne Coffey. The book describes how Myer used the R-Factor with his team during the 2014 national championship season.

R-Factor has been implemented by corporations, organizations, college athletic teams, and public schools across the United States as a framework to teach individuals how to respond to events in a discipline-driven manner based on a common language and a shared culture (Kight, 2019). The R-Factor is based on the premise that people constantly experience events beyond their control, but they always have the opportunity to choose a disciplined response that will elicit a desirable outcome. Event + Response = Outcome along with the six steps in the framework are detailed in a later section. It is important to be clear that R-Factor is not a recognized, research-based, SEL framework. However, it has seen extensive use in K-12 schools—99 schools were on the Focus 3 client list as of November 2019 (Sayre, 2019)—yet there is no literature to date evaluating its effectiveness. With an average implementation cost of around $40,000, there is a need to further investigate the effectiveness of R-Factor and to understand if it is a viable program in the K-12 school setting. The purpose of this study is to determine if the implementation of R-Factor has any effect on student SEL skills, school climate, and student discipline.

Definition, History, & Theoretical Basis

In order to evaluate the effectiveness of the R-Factor program, it is important to first understand why social and emotional learning has become an integral part of the education process. CASEL defines SEL as "the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions." Despite significant interest in the field of SEL over the decades since its inception—as of 2015, there were over 500 research evaluations of SEL programs (Weissberg et al., 2015)—and despite CASEL's aforementioned definition, there is little consensus of a definition of social and emotional learning (Humphrey et

al., 2011). This confusion may be the result of disagreements on a definition of emotional intelligence because scientific research on emotional intelligence sparked the SEL movement (Salovey & Mayer, 1990). Mayer (2001) states that the philosophical foundations of emotional intelligence can be traced back 2,000 years, but the field experienced increased interest around 1900 with the creation of sophisticated intelligence tests and Darwin's theory of the importance of emotion in evolution. Thorndike's and others' social intelligence emerged, but results were not supported, so conceptions of intelligence remained cognitive through 1969 (Mayer, 2001). Sternberg's (1985) practical intelligence and Gardner's (1993) multiple intelligences supported two distinct components—intrapersonal (emotional) and interpersonal (social) intelligences—and their work also established that intelligence, emotion, and social relations were related (Elias, et al., 2008). Scientists also began to occasionally use the term emotional intelligence, often referred to as EQ or EI, as brain research separated emotion and cognition (Mayer, 2001). According to Mayer et al. (2000), the construct of EQ was first introduced in two academic journal articles in 1990. As a result, Salovey and Mayer (1990) are often credited with coining the term emotional intelligence, which they defined as "the ability to monitor one's own and other's feeling and emotions to discriminate among them and to use this information to guide one's thinking and actions" (p. 189). Eventually, three major emotional intelligence theories emerged.

In 1995, Daniel Goleman released a best-selling book *Emotional Intelligence* that received extensive press coverage and made the cover of *Time* magazine (Gibbs, 1995), and led to Goleman's Theory of Emotional Intelligence. Goleman's work brought EQ to the mainstream. According to Cox and Nelson (2008), "Everyone began to use the term to refer to personality traits that promoted success in life and especially to psychological and social skills that could be

learned" (p. 9). The attraction to EQ occurred, in part, due to Goleman's extraordinary claims that it may be as powerful as IQ (Mayer et al., 2008). Nonetheless, research on emotional intelligence expanded in the 1990's, which in turn, led to an interest about how social and emotional learning produces positive developmental outcomes. Ironically, Goleman's book led to increased research and public policy, but it also broadened the field, causing much confusion (Mayer, 2001).

Mayer et al. (2004) continued to develop their theory which eventually became known as the Ability Model of Emotional Intelligence. The theory included a Four Branch Approach: Mayer and Salovey's (1997) ability-based definition viewed emotional intelligence as a type of intelligence relatively independent of personality traits, whereas Goleman's popularized Theory of Emotional Intelligence expanded the definition and blended it with skills and characteristics (Mayer, 2001) adding various personal attributes (Livingstone & Day, 2005). According to Mayer et al. (2008), this created a confusing mixed model of emotional intelligence and trait theory, which has no theoretical justification of why some traits are included and others are not.

The third conceptual model of emotional intelligence is the Bar-On (1997) model. It also includes non-ability factors in the definition and identifies five major areas that lead to success: intrapersonal functioning, interpersonal skills, adaptability, stress management, and general mood (Livingstone & Day, 2005). Bar-On (2005) combines the terms, defining emotional-social intelligence as "a cross- section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands" (p. 3). Thus, the model includes a combination of mental abilities and those that are more personality based.

Petrides et al. (2004) have contributed to the emotional intelligence debate as they differentiate between the different types of emotional intelligence defining ability emotional intelligence as "one's actual ability to recognize, process, and utilize emotion-laden information." They define trait emotional intelligence as "a constellation of behavioral dispositions and self-perceptions concerning one's ability to recognize, process, and utilize emotion-laden information" (p. 278). Trait theory encompasses various dispositions from the personality domain; the authors contend that it is easier to assess than ability emotional intelligence (Petrides et al., 2004). Mayer et al. (2008) criticize Petrides and Furnham (2001) for their concept because it allowed for the overlap of personality traits and emotional traits as Petrides and Furnham believed that the theoretical power of the construct was more important than incremental validity (if the test offers more predictive ability than previous tests). Mayer et al. (2008) also contend that emotional intelligence is threatened less by critics and more by supporters who apply the term broadly to a variety of traditional personality variables, which ultimately compounds confusion about the definition (as cited in Daus & Ashkanasy, 2003, and Murphy & Sideman, 2006). The careless application of emotional intelligence may be caused by a lack of perspective on personality as a whole, society's historical interest in emotion and understanding the balance between following the heart or the head in decision making, and the influence of the Big Five personality traits based on an overlap of characteristics (Mayer et al., 2008). The Big Five personality traits, now called the Five-Factor Theory, includes the five factors of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Costa & McCrae, 1992). Mayer et al. (2008) contend that renaming classical personality traits such the Big Five as emotional intelligence "obscures the meaning of EI, and EI is an important enough new construct as to make that unfortunate and problematic" (p. 513).

The differing theories proposed by scholars has also led to criticism against emotional intelligence. Waterhouse (2006) outlined several claims against emotional intelligence. Cherniss et al., (2006) responded to the critical review. First, Waterhouse (2006) claims there is a problem of conflicting constructs. The authors contend this is normal for a theory so young in its development, explaining that even after 100 years of existence there is still much debate about defining and measuring IQ (Cherniss et al., 2006). The abundance of research and interest in emotional intelligence proves its worth, and although there are differences between models, there is much overlap to establish a definition; for example, all frameworks involve awareness and management of one's own emotions and awareness and management of others' emotions (Cherniss et al., 2006). Waterhouse (2006) also claims that emotional intelligence and IQ have not been differentiated. In response, Cherniss et al. (2006) provide several studies that prove otherwise. The most convincing is a meta-analysis of 58 studies of emotional intelligence that included 8,000 participants and it revealed that ability measures of emotional intelligence did not correlate highly with or between personality and cognitive ability (Van Rooy et al., 2005). Cherniss et al. (2006) counter the argument that emotional intelligence has not been conclusively linked to real-world success with several studies. The most applicable to the discussion here is a Stone et al. (2005) study that discovered above-average principals in Ontario scored significantly higher on total emotional intelligence and all four dimensions of emotional intelligence on Bar-On's Emotional Quotient Inventory (EQ-i). In response to Waterhouse's (2006) criticism that there is no unique neural system for emotional and social abilities, Cherniss et al., (2006) argue that patients with brain lesions and people with Asperger's syndrome may have normal or high IQ while demonstrating impairments in social judgements and decision-making or have deficits in emotional intelligence. Cherniss et. al (2006) counter the argument that emotional intelligence

has not been conclusively linked to real-world success with several studies, many of which will be noted later in this review.

Simultaneously, as emotional intelligence theory was evolving, educators were becoming increasingly interested in social and emotional intelligence. Elias et al., (2008) note that John Dewey (1933) theorized the importance of empathy and effective personal management in education. However, social and emotional learning did not gain significant traction until the work of Mayer and Salovey inspired the formation of CASEL, which occurred as the field was transitioning from a focus on prevention of problems toward a broader goal of promoting social competence. As noted, many question the scientific basis of Goleman's Theory of Emotional Intelligence. Regardless, CASEL, with Goleman as one of its founding members, eventually expanded Goleman's (1995) skill clusters and created an SEL and emotional intelligence skills framework which included self-awareness, social awareness, self-management, responsible decision-making, and relationship management (Elias et al., 2008). The field of SEL was established and defined in 1997 in the book *Promoting Social and Emotional Learning: Guidelines for Educators* (Elias et al., 1997). Although the field itself is relatively new, its roots can be traced back to 1900 (Osher et al., 2016). SEL encompasses a broad area of programs including ones to prevent disruptive behavior, promote healthy choices, to highlight social responsibility, or to reduce school violence (Osher et al., 2016). Recently, the concept has gained momentum as a way to increase student achievement and engagement, to promote mental health and wellness, and to ultimately graduate students who are more prepared to compete in college and in the workplace.

There are multiple emotional intelligence theories that formed the scientific basis for the SEL movement. Just as emotional intelligence formed the scientific basis for the SEL movement,

Elias et al. (2008) explain that various theories impacted the methods and techniques of SEL programs. There is not enough space here to discuss the growing number of theories in existence that influence the expanding field of SEL. However, it is important to provide the reader with a brief overview of the major contributing theories. Bandura's (1973) Social Learning Theory (SLT) states that cognitive learning and learned behaviors occurs during social interactions through modeling and observation and by how individuals pull from their interactions with others to create expectancies. Bandura (1973) applied the concept to understanding aggressive behavior, arguing that without providing a child with more effective skills, it would be unlikely that the aggressive behavior would change (Elias et al., 2008). Using SLT as a foundation, SEL relies on modeling by adults and peers in a child's natural environment to reinforce new social and emotional skills so that the child responds in socially appropriate ways (Elias et al., 2008).

Cognitive Behavior Theory (CBT) naturally followed SLT as an impact on SEL because CBT operates under the concept that problems of cognition, affect, and behavior are learned, and thus they can be replaced with better responses (Elias et al., 2008). CBT has a problem-solving component that is directly related to SEL principles. According to Elias et al. (2008), Spivack and Shure (1974) developed interpersonal cognitive problem solving as a universal, preventative approach that could be used in school and family life. These programs were eventually brought to scale and have resulted in similar SEL and CBT pedagogies—both emphasize real-life problems and thinking through hypothetical situations to deal with present situations (Elias et al., 2008). Ultimately, CBT influenced the universal, preventative, and problem-solving aspects of SEL.

Elias et al. (2008) explain that SEL interventions often seek change beyond immediate anti-social behavior, strive to alter entire social systems such as classrooms, schools, districts,

and communities. The approach is grounded in the work of Lewin (1951) who was an early adopter of the theory that behavior is at least as strongly influenced by context as by individual biases (Elias et al., 2008). The view evolved into a community psychology/social-ecological perspective with the premise that SEL acquisition and overall positive effects on students are greatest when interventions address the entire systems of psychological and social forces in sustained ways (Elias & Clabby, 1992; Zins, Weissberg, et al., 2004) (as cited in Elias et al., 2008).

Another theoretical foundation of SEL is the field of positive youth development. In response to a myriad of issues facing society and an increase in juvenile crime and troubled youth, prevention efforts in schools and communities arose with a goal to support youth to prevent problem behaviors (Catalano et al., 2004). Early prevention largely focused on single problem issues. Longitudinal research eventually led practitioners to use environmental and individual predictors in prevention efforts and to shift the attention away from single problem behaviors to broader focus on the development precursors of both positive and negative youth development (Catalano et al., 2004). Instead of only focusing on negative behaviors, prevention science eventually began to promote positive behaviors giving rise to positive youth development which posits that youth needs are best met by creating supportive environments that promote positive outcomes such as school achievement in mutually supportive relationships with adults and peers (Brackett & Rivers, 2014; Catalano et al., 2004). SEL utilizes a skill-building, whole-child approach and is often delivered in school settings where the focus is on the educational and developmental needs of youth through positive interventions (Brackett & Rivers, 2014). SEL programs often assume the positive youth development approach to create “caring, supportive, safe, and empowering settings” (Brackett & Rivers, 2014, p. 6) where students can

build skill and are supported by adults and peers in a safe and orderly environment (Catalano et al., 2004).

Social and Emotional Learning Frameworks

Although the goals of SEL are clear, because it is used synonymously with so many different terms including bullying prevention, character education, life skills, 21st century skills, soft skills, non-cognitive skills, emotional intelligence, mindset, grit, resiliency, positive youth development, and whole child education it is a confusing concept. The large number of SEL frameworks further complicates the definition; some frameworks are broad while others are narrow. According to Dusenbury et al. (2015), frameworks include those that have multiple domains or programs, those that have a narrow domain focus (emotional intelligence), those that are organized around a single topic (growth mind-set), those that are skill-based, and those that are focus on state standards (as cited in Osher et al., 2016).

Multiple theoretical foundations have contributed to the field of SEL resulting in a variety of definitions, thus it is understandable that various SEL frameworks now exist. Osher et al., (2016) define framework as "an organizing structure that underlies a system, concept, or set of linked ideas and can be broad or narrow" (p. 652). Frameworks may be directly or indirectly tied to SEL and their approach tends to be a function of their goal to inform research, practice, or policy (Osher et al., 2016). Frameworks may be comprehensive and cover multiple domains, focus on a single domain, cover a narrow concept, be a list of skills, or be integrated into state standards (Dusenbury et al., 2015). Frameworks use terms, skills, and competencies differently and some focus on school success, while others promote long-term growth (Osher et al., 2016). Although frameworks take several forms, they are the result of their focus on practice, research, or policy or a combination thereof (Osher et al., 2016). These factors have led to an expansive

list of frameworks. For example, through funding from the Robert Wood Johnson Foundation, the American Institute for Research (AIR) conducted a scan and analysis of SEL and discovered a total of 136 frameworks in nearly 20 areas of study that fall under the term social and emotional competencies (Berg et al., 2017).

To add to the confusion of defining and understanding SEL, Berg et al. (2017) also revealed that within frameworks, different terms are used for social emotional competencies that have similar definitions and that one competency may encompass what other frameworks would consider several competencies in one. Explore SEL is an on-going research project at the Harvard University Graduate School of Education, funded by the Taxonomy Project, with goals to "increase transparency in SEL information and to help practitioners figure out which skills to focus on, how to build and measure SEL skills, and to reduce the complication created by so much information in the field" (Explore SEL, n.d.). The website explains that SEL has been defined broadly and serves as an umbrella for many subfields, creating a lack of clarity for implementing SEL and the confusion is increased due to the large number of frameworks with different terminology about the same skills (Explore SEL, n.d.). In response, Explore SEL created a tool to define, categorize, and compare frameworks to determine which skills they address. It is impossible to cover all of the frameworks associated with SEL. Therefore, this literature review focuses on what Osher et al. (2016) describe as comprehensive frameworks that include "a broad array of inter- linked domains and typically situating the model in key and influential contexts" (p. 652).

Jones and Bailey (2012) present a framework based on developmental theory with an underlying concept that SEL skills develop over time as foundational skills evolve. There are three core domains at the center of the framework: emotional processes including emotional

knowledge and expression, emotional and behavioral regulation, and empathy, social/interpersonal skills which include understanding social cues, interpreting others' behaviors, navigating social situations, interacting positively with peers and adults, and other prosocial behavior, and cognitive regulation including attention control, inhibiting inappropriate responses, working memory, and cognitive flexibility or set shifting (Jones & Bailey, 2012). The three domains influence short-term and long-term outcomes such as academic achievement, behavioral adjustment, and emotional health (Jones & Bailey, 2012). According to Jones and Bouffard (2012), these SEL skills are influenced by various environmental factors including home life and the community; the authors focus on the school context which includes culture and climate in the form of healthy relationships, instructional support, and classroom management. Effective SEL implementation occurs when the community, district state, and federal policy supports it and when teachers possess strong social-emotional competence and pedagogical skills (Jones & Bouffard, 2012). Jones and Bouffard (2012) assert that SEL skills develop in a complex system of interactions and relationships, therefore, schools must take a systems approach to implementation.

Foundations for Young Adult Success is another comprehensive framework developed by the Chicago Consortium on School Research and the Wallace Foundation. According to the framework, there are three key factors that support a successful transition into young adulthood: (1) agency is the ability to make choices and take an active role in one's life path instead of being the product of circumstances, (2) integrated identity is an internal consistency of who one is across time and multiple social identities, and (3) competencies are the abilities that enable people to effectively perform roles, tasks, or achieve objectives (Nagaoka et al., 2015). Self-regulation, knowledge and skills, mindsets, and values underlie the three components and

operate as a set of cognitive and non-cognitive components that develop over time in phases (Nagaoka et al., 2015). Development is impacted by various settings including the home, school, community, and larger community. Consistent positive interactions with care givers aids in cognitive stimulation, and therefore, adults must understand development itself and take an intentional, developmental approach that is focused on the foundational components and key factors that lead to transition into a successful adulthood (Nagaoka et al., 2015).

Denham (2005) created a framework of social–emotional competence that distinguishes three emotional competence skills (self-awareness, self-management, and social awareness) and two relational/prosocial skills (social problem solving and relationships skills). As Humphrey et al. (2011) explain, "the [Denham] model benefits from reflecting the domains outlined in major theoretical models (e.g., Bar-On, 1997; Goleman, 1995; Salovey & Mayer, 1990) in this area, without suffering from the nebulous, imprecise nature of the more wide-ranging definitions (e.g., Petrides & Furnham, 2001) that have attracted criticism" (p. 619).

Denham's (2005) framework is similar to the one created by the Collaborative for Academic of Social and Emotional Learning (CASEL). Osher et al. (2016) designates CASEL as "the most ubiquitous and long-standing" and asserts that it "builds on SEL research more broadly" (p. 652). *Explore SEL* describes CASEL "as a thought leader at the forefront of SEL research, practice, and policy; their framework is widely-used throughout the United States and abroad." CASEL explains that its integrated framework promotes interpersonal, intrapersonal, and cognitive competence (CASEL, n.d.). According to Osher et al. (2016), the goals of SEL in the educational setting are to "promote positive learning environments that are supportive, engaging, and participatory and foster the development of the five interrelated sets of cognitive,

affective, and behavioral competencies" (p. 646). The five competencies at the center of the CASEL framework are:

- Self-awareness is the ability to recognize one's own emotions, thoughts, and values and how they influence behavior across contexts.
- Self-management is the ability to manage one's emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations.
- Social-awareness is the ability to understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts.
- Relationship skills involve the ability to establish and maintain healthy and supportive relationships and to effectively navigate settings with diverse individuals and groups.
- Responsible decision-making is the ability to make caring and constructive choices about personal behavior and social interactions across diverse situations. (CASEL, n.d.).

The Ohio Department of Education adopted *Ohio's K-12 Social and Emotional Learning Standards* in June of 2019, choosing the CASEL framework as its basis for the standards. CASEL's framework is one of the most well-known and is a resource for implementing SEL (Osher et al., 2016). It is comprehensive and it includes key SEL concepts based on research findings. Furthermore, CASEL is the chosen program in Ohio where this study takes place. Based on the above factors, the majority of the work in this study focuses on the CASEL framework.

Benefits of Social and Emotional Learning

Although there are multiple definitions, theoretical foundations, and frameworks of SEL, there is a convincing amount of research that confirms the overall concept of SEL leads to positive student and life outcomes. In a widely cited meta-analysis that included 213 studies and 270,034 students, Durlak et al. (2011) found that SEL programs improve students' skills, attitudes, and positive social behaviors, reduces conduct problems, and lowers emotional stress while also improving academic performance by an 11-percentile gain. In another meta-analysis of 75 published studies from 1995-2008 on school-based social, emotional, and/or behavioral (SEB) programs, Sklad et al. (2012) examined the overall effects of SEB on social skills, anti-social behavior, substance abuse, positive self-image, academic achievement, mental health, and prosocial behavior revealed that SEB programs have positive effects on the outcomes studied with the largest short-term effects on social-emotional skills, attitudes toward self, and prosocial behavior, with academic achievement and reduction of antisocial behavior following.

A more recent meta-analytic review of 82 different interventions involving more than 97,000 students from kindergarten to high school, Taylor et al. (2017) found that the positive effects of SEL are evidenced at least six months and up to 18 years after programs have ended, indicating that SEL has an enduring, longitudinal effect. Although only eight of the studies in the research included academic performance, 3.5 years after the last intervention, students exposed to SEL programs experienced an average 13 academic percentile points higher than their non-SEL peers (Taylor et al., 2017). The study also revealed that SEL interventions have a dual benefit of affecting positive behavior and guarding against negative outcomes, are beneficial to all demographic groups for both domestic and international students, and students revealed stronger emotional assets and higher well-being at follow-up, confirming the lasting effects of SEL (Taylor et al., 2017).

Using data from the Fast Track study of low-socioeconomic status neighborhoods in three cities and one rural setting, Jones et al. (2015) conducted a longitudinal quantitative study to assess the association between measured outcomes in kindergarten and outcomes 13 to 19 years later. Results indicated that kindergarten prosocial skills were significantly predictive of all four education and employment outcomes through age 25 as the sample students were more likely to graduate high school, complete a college degree, obtain stable employment, and be employed full-time; during their school years, they were less likely to receive special education services or to repeat a grade (Jones et al., 2015).

In an early study conducted by Parker et al. (2004), researchers administered Reuven Bar-On's Emotional Quotient Inventory to 667 students (304 males and 363 females) aged 14-18 (grades 9-12) at a high school in Huntsville, Alabama. Results indicate that academic success is strongly associated with several dimensions of emotional intelligence, creating a link between social and emotional competence and academic success for both boys and girls. In a more recent similar study, Rice (2018) conducted a quantitative analysis of the relationship between emotional intelligence and academic achievement in an elective course, Jr. Reserve Officers' Training Corps (JROTC). 486 cadets in grades 9-12 with diverse demographic backgrounds across the United States completed Conover Company's Success Profiler, a digital version of the Personal Skills Map, an instrument used to measure emotional intelligence and results revealed that 10 of 11 emotional intelligence skills were significantly correlated with higher grade point averages (Rice, 2018). In perhaps the most extensive, randomized, systematic meta-analysis to date concerning social and emotional learning interventions and academic achievement, Corcoran et al., (2018) selected 40 studies of pre-K to 12 grade that met the criteria for high methodological characteristics from the past 50 years to determine if SEL programs have a

positive effect on dependent measures of reading, mathematics, and science performance. The results of the review uncovered a positive effect size for reading of +0.25, mathematics of +0.26, and a smaller science effect size of +0.19 (Cheung et al., 2018). The authors call for more large-scale studies to evaluate the effectiveness of evidence-based SEL programs, arguing that some of the SEL approaches used widely in schools tested through large randomized experiments do not present strong evidence of effectiveness (Cheung et al., 2018).

Social and Emotional Learning for Prevention

To this point the much of the discussion has centered around SEL's ability to increase positive outcomes, but there is also significant research of its ability to minimize negative outcomes. Researchers have recently tried to understand the exact interplay between SEL and academics. A longitudinal examination of the popular SEL program, Promoting Alternative Thinking Strategies (PATHS), involving 1,626 students from 45 state-maintained schools in northwest England, conducted by Panayiotou et al. (2019), provides possible new insight into how this relationship occurs. The study indicated that students with greater social-emotional competence experienced fewer mental health difficulties, which in turn predicted higher academic attainment, suggesting that it is not the improvement of social-emotional competence that influences academic attainment, instead, it is its impact on buffering mental health difficulties that promote academic attainment (Panayiotou et al., 2019). The study reveals new information about the mechanisms through which SEL leads to academic achievement; more research is needed to draw definitive conclusions.

In one study in British Columbia and Ontario, Canada, Collie et al. (2012) linked SEL to fewer classroom disruptions and a more positive classroom environment. In the aforementioned Jones et al. (2015) study, prosocial skills of kindergartners at 13 to 19 years' follow-up were

inversely predictive of police involvement or ever being detained. It also reduced the risk of later substance abuse of alcohol or marijuana. SEL predicted the number of years on medication for emotional or behavioral issues through high school, thus linking prosocial skills and positive mental health. Domitrovich et al. (2017) state that intrapersonal and interpersonal competencies help youth to avoid risk behaviors and to behave appropriately. They also reviewed five school-based intervention research meta-analyses. They demonstrated the positive effects of social-emotional competence across gender, ethnicity, age, risk, and location. The intrapersonal and interpersonal competencies may have an even greater impact for lower socio-economic students. Furthermore, the authors conducted a level 3 analysis of intervention mechanisms to understand how social-emotional competence changes behavior. They discovered that social-emotional competencies were a change mechanism in seven of the nine studies conducted in elementary settings for the variables that have positive effects on overt aggression (Domitrovich et al., 2017).

Heckman and Kautz (2012) studied General Education Development (GED) graduates who had dropped out of high school. They discovered that GED graduates had similar cognitive skills and performed about as well as high school graduates on achievement tests. However, the GED students lacked social and emotional skills, which in comparison to high school graduates, resulted in lower graduation rates from college, lower hourly wages, higher divorce rates, worse health a higher likelihood of smoking, drinking, violent and criminal behavior, and they were more likely to be imprisoned (Heckman & Kautz, 2012). While, cognitive skills are unquestionably important for success, they cannot overcome a lack of non-cognitive, social and emotional skills on a variety of life outcomes.

Cost Benefit of Social and Emotional Learning

In addition to promoting positive school and life outcomes and guarding against negative outcomes, SEL may also provide cost benefits. Lee et al. (2012) conducted an assessment of researched-policies that can lead to cost benefits for taxpayers in the state of Washington. They evaluated several policies including the Seattle Social Development Project, a social and emotional program for students in grades 1-6 designed to promote bonding to school and family to protect against negative outcomes. Lee et al. (2012) reported over a $2,500 return on investment for society outcomes that include: likelihood to graduate, lower grade retention, lower rates of sexual activity, lower crime rates, and less substance abuse. It is noteworthy that an evaluation of the popular social emotional learning program, Promoting Alternative Thinking Strategies (PATHS), indicated a slight negative return on investment with a negative $.17 benefit to cost ratio in 2011 dollars (Lee et al. 2012). Nonetheless, overall, there is evidence that supports the cost benefits of SEL even internationally. A Swedish longitudinal study analyzed drug use of students over a five-year social and emotional program intervention delivered by teachers and found a decrease use of drugs, which yielded a minimum cost return of 6:1 (Klapp et al., 2017). In a more comprehensive and well-known study, Belfield et al. (2015) conducted a benefit cost analysis of six prominent social emotional interventions programs and found that on average, every $1 invested in SEL programming results in a net benefit of $11. This study also demonstrated that SEL programs can reduce juvenile crime, garner higher lifetime earnings, and create better mental and physical health, all of which lessen the individual and collective economic burden (Belfield et al., 2015).

Support for Social and Emotional Learning

The combination of the extensive literature that demonstrates the positive outcomes of SEL and the increasing challenges facing public schools, has led to a groundswell of support for

implementation across the United States. The amount of resources dedicated to SEL implementation is staggering. Krachman and Larocca (2017) estimate that U.S. K-12 public schools devote a total of $21–47 billion per year on SEL for products and programs and teacher time focused on SEL. About $640 million is spent on products, but teachers spend about 4.3 hours per week on SEL, which amounts to an estimated cost of $20–46 billion per year (Krachman & Larocca, 2017).

Although there is significant cost involved in implementation, there is wide support among educators for SEL. In a 2013 national survey called *The Missing Piece*, 93% of teachers reported that SEL should be an important part of the in-school experience and that it should be given greater emphasis (Bridgeland et al., 2013). 95% of these same teachers believe that SEL skills are teachable, 97% believe that the skills benefit students from all socioeconomic backgrounds, and 77% believe that SEL increases standardized test scores and overall academic achievement (Bridgeland et al., 2013). Although the response rate was low at only 4.8% of those invited chose to participate, a 2017 Ohio Department of Education (ODE) survey that included 8,314 teachers, administrators, and student service providers across Ohio, indicated that 98% believe social emotional skills are linked to student success (ODE, 2017).

School administrators agree with teachers about the need for SEL. In a 2017 national survey, DePaoli et al. (2017) found that nearly all principals believe that SEL should be taught to all students regardless of socioeconomic backgrounds, that it promotes a positive school climate, improves relationships between students and teachers, decreases bullying, and prepares students for the workforce. It should be noted that while 93% of the principals surveyed believe SEL improves academic achievement, only 40% of those principals believe it is ‘definitely true’ that it improves academic achievement (DePaoli et al., 2017). However, in a 2019 follow-up to the

survey, 62% of principals believe SEL would have a major benefit on student's performance in academic coursework and those saying they are very committed to SEL rose from 69% in 2017 to 74% in 2019 (Atwell & Bridgeland, 2019). Similarly, schools that have developed a long-term plan to support SEL rose from 43% in 2017 to 55% in 2019.

Social and Emotional Learning and State Standards

The convincing research base and nation-wide support for SEL has led to an increase of states officially adopting SEL standards and curriculum. This trend is supported by those in the field as 62% of teachers and 71% in low-performing schools think the development of social and emotional skills should be explicitly stated in their state education standards (Bridgeland et al., 2013). Principals are even more in agreement with the movement as 87% believe that social and emotional skill development should probably or definitely be explicitly stated in state education standards and 70% believe a formal curriculum is necessary for teachers to successfully develop students' social and emotional skills, a number that rose from 43% in 2017 (Atwell & Bridgeland, 2019).

Dusenbury et al. (2015) recommended that every state have comprehensive, free-standing preschool through high school SEL standards and age-appropriate benchmarks that are culturally and linguistically appropriate, include guidelines for creating a positive learning climate, provide guidelines about teacher practices that support SEL, and be linked to strategies to enhance implementation. At the time of the Dusenbury et al. (2015) publication, all 50 states had preschool standards, but comprehensive, K-12 standards were rare. Illinois was the first state to develop SEL standards in 2004 (Weissberg et al., 2015). By 2013, three states had preK-12 state standards and by 2018 the number increased to fourteen (Dusenbury et al., 2018). The Ohio

Department of Education officially adopted *Ohio's K-12 Social and Emotional Learning Standards* in June of 2019 (ODE, 2019).

Social and Emotional Learning and School Climate

Research also supports SEL integration as a way to improve overall school climate. Cohen (2017) explains that school climate and SEL are conceptually and historically different, but "effective and sustainable school climate and/or SEL improvement processes are overlapping and increasingly aligned with findings from implementation science" (p. 2). Greenberg et al. (2003) also note that SEL programming creates a unified approach for positive youth outcomes which improves the social-emotional climates of classrooms, schools, and districts. Blended school climate and SEL programs may have additive effects on students and there is considerable overlap between social and emotional competence and school climate (Berg et al., 2017). School climate and SEL can be aligned as they help build knowledge and promote one another (Osher & Berg, 2017). Osher and Berg conclude (2017):

> The relationship between positive school climate and SEL is interactive and co-influential, it occurs in all settings and student-teacher-staff interactions, and influences students and teachers directly and indirectly (p. 6). Although attending to all components of school climate may be useful to build healthy schools, attention to those components most proximal to building students' social, emotional, and cognitive competence may most efficiently drive and reinforce changes in students and adults (p. 12).

These assertions hold true in teacher perceptions as well because teachers in schools with less-developed SEL are more likely to report their school has a negative school climate (Bridgeland et al., 2013). Teachers who report their schools have successful SEL programs are half as likely

to say their school has a negative school climate versus schools without strong programs (Bridgeland et al., 2013).

SEL implementation may even have an impact on overall teacher well-being. Collie et al. (2012) found that teachers' perceptions of school climate and SEL determine teachers' well-being and motivation when implementing school climate and SEL programs. Teachers feeling competent in implementing SEL was linked to lower stress level, higher job satisfaction, and higher teacher efficacy (Collie et al., 2012). Positive teacher-student and student-student relationships have an impact on emotional engagement. The combination of teacher-student relationships, student-student relationships, and Teaching of Social Emotional Competencies (TSEC) are impacted by student perceptions of these factors individually and school-wide (Yang et al., 2018). There is evidence that SEL programs are specifically implemented to address school climate. In meta-analytical review of 75 published studies, 25% of SEL programs studied were directed at making a change in school culture and climate (Sklad et al., 2012).

Social and Emotional Learning Implementation

There is a plethora of approaches for SEL implementation; programs may be implemented in single classrooms, schools, or across entire districts. Programs may be pre-packaged, stand alone, combined with other programs, or integrated into the curriculum. As the research base has grown, so has the list of best-practices for implementation. Regardless of the approach, successful education of the whole child depends upon the extent to which learning occurs in caring, supportive, safe, and empowering settings (Greenberg et al., 2003). The model of SEL developed by CASEL has garnered much support in the literature and it draws upon the interconnectedness of a supportive climate and learning social emotional skills. Elias et al. (2007) describes the implementation interplay as:

> The logic model behind this view, in simplified form, is that (1) students become open to learning environments that are respectful, orderly, safe, academically challenging, caring, involving/engaging, and well-managed; (2) effective SEL-related programs emphasize, impart, and develop key attitudes and skills that are essential for reducing emotional barriers to learning and successful interpersonal interactions; and (3) reducing emotional barriers to effective learning and interaction is essential to low-performing students to learn academic content and skills deeply and for all students to reach their potential and apply what they learn in school to life inside and out of school. (Elias et al., 2007, p. 253).

Durlak et al. (2011) describes the CASEL model that advocates for the SAFE implementation approach (Sequenced—connected and coordinated activities to foster skills development, Active—active forms of learning to help students master new skills and attitudes, Focused—emphasizes developing personal and social skills, Explicit—targets specific social and emotional skills). Durlak et al.'s (2011) meta-analysis revealed that programs following all four SAFE procedures produced significant effect for all six of the SEL outcomes studied. Programs are also more effective when support extends beyond the classroom (Durlak et al., 2011) and when there is vertical alignment—developing skills across grade level—and horizontal alignment—developing skills across contexts and environments (Jones & Bouffard, 2012). Coelho & Sousa (2017) found the SAFE acronym is effective when implementing SEL programs with low-middle aged students and also suggest that practices are continuously evaluated. Additionally, they conclude that a pre-packaged program with a broader focus is more advantageous than a narrower focus with more time spent on each SEL competency (Coelho & Sousa, 2017).

Allbright et al. (2019) identified six common strategies of high-performing SEL schools 1.) use strategies to promote positive school climate and relationships, 2.) support positive behavior, 3.) promote engagement, relationships, and SEL through elective courses and extracurricular activities, 4.) use SEL-specific classroom practices, 5.) hire, organize and train personnel to support students' SEL, and 6.) measure and use SEL data. There is also a need for high-quality program implementation supported by professional development in preprogram training and ongoing assistance, which requires a significant financial investment by the school (Greenberg et al., 2017). Although Durlak (2015) admits that implementation may seem overwhelming, he warns that low-quality implementation of programs yields minimal or no positive effects. The author stresses the importance of monitoring implementation and understanding that implementation is costly, and therefore, it requires a commitment to success. Durlak (2015) also outlines the need for quality professional development support that goes beyond an informational workshop or training manual. The researcher also notes that implementation is multi-dimensional and includes at least eight different components: fidelity, dosage, quality of program delivery, participant responsiveness, program differentiation, monitoring of control or comparison conditions, program reach, and adaptation (Durlak, 2015).

Meyers et al., (2012) created a Quality Implementation Framework (QIF) that outlines 14 steps in four phases. All of the phases will not be discussed, but it is imperative to mention that 10 of the 14 stages occur before implementation begins, signaling the importance of pre-planning. The QIF is based on implementation science as is the *CASEL Guide for Schoolwide Social and Emotional Learning*, which is a *School Guide* for a systems level implementation model structured around CASEL's School Theory of Action (ToA) (Meyers et al., 2015). The ToA has six key activities: (1) establish a shared vision of school-wide SEL; (2) assess resources

and needs for school-wide SEL; (3) provide ongoing professional learning; (4) adopt evidence-based SEL programs; (5) integrate SEL into the core functioning of the school; and (6) use data and a cycle of inquiry to improve SEL practice and student outcomes (Meyers et al., 2015). Meyers et al., (2019) evaluated the *School Guide* and concluded that sustaining progress is best achieved by embedding the model into district structures and supports and efforts should be made to link existing interventions (i.e. positive school climate efforts) with the SEL program. Furthermore, the results indicate that the *School Guide* assists in creating a sustainable, standardized implementation strategy and that programs are strengthened when the implementation model is embedded into existing structures such as district improvement plans, SEL leadership teams, and district personnel (Meyers et al., 2019). According to Sklad et al. (2012), classroom teachers can effectively deliver social, emotional, and/or behavioral programs without compromising effectiveness and the evidence in the study does not suggest that secondary schools have different effectiveness compared to elementary schools.

Measuring Social and Emotional Learning

Taylor et al. (2018) explain that SEL assessments help schools to communicate SEL as a priority, establish a common SEL language, create an understanding of how SEL competencies grow over time, improve SEL instruction and implementation, evaluate program effectiveness, and support equitable outcomes. The reasons for assessing SEL are clear, but the practice is complicated because there is an abundance of assessments that have been developed for a variety of purposes and they are usually created separately from the social and emotional frameworks that are being implemented in the school (Berg et al., 2017). This creates misalignment of terms and definitions in the framework and the measuring tools, making it difficult for school personnel and practitioners to determine which assessment is appropriate. Furthermore,

measuring the development of SEL has struggled to keep up with the growing field and the shelf-life of the assessment tools are often short-lived (Humphrey et al., 2011), making the task even more daunting. The Durlak et al. (2011) meta-analysis found that only 57% of studies reported any implementation data. The lack of measurement is also evident in a national principal survey in which only 17% reported they were aware of which assessments of students' SEL competencies were available to use and 16% believed their teachers knew how to use the data (DePaoli et al., 2017). The public also supports SEL assessment as 84% of Americans believe that schools should assess students' interpersonal skills (Phi Delta Kappa International, 2017).

Choosing appropriate assessments requires an understanding that competencies are often organized by intrapersonal—ways of dealing with oneself—or interpersonal—knowledge, skills, and attitudes directed outwardly—and the competencies are organized according to one's awareness or one's skills (Taylor et al., 2018). Practitioners should also consider several factors when choosing measurement tools. Assessments are emerging rapidly, though few have been research-validated. However, the *RAND Assessment Finder* and CASEL's *Assessment Work Group (AWG) Assessment Guide* can assist practitioners in finding appropriate, valid, and reliable measurement tools for their applications (Taylor et al., 2018). Taylor et al. (2018) also recommend a diagnostic approach that focuses on strengths instead of deficits to promote the development of all student competencies; assessments should not be used as part of state accountability systems or for teacher evaluations. It is also important to consider equity and cultural factors, to remain cognizant that SEL is a development process that occurs in phases, and to utilize a holistic view of competency development where data is examined at all grade levels alongside related factors such as adult development and climate (Taylor et al., 2018).

Research supports a systemic, school-wide approach when implementing and assessing SEL competencies (Weissberg et al., 2015; Taylor et al., 2018). This process begins by framing the overall SEL effort by adopting a framework; CASEL serves as the overall framework for this study and it is delivered through the Focus 3, R-Factor system (discussed later). According to the RULER Theory of Change (ToC), intervention components delivered through training and coaching of educators and providing them with necessary materials and resources leads to implementation in the classroom, school, and even at the family level. This eventually produces proximal outcomes such as an improved emotional climate and improved emotional intelligence, ultimately producing desired outcomes of better attention, memory, and learning, health benefits, relationships, decision-making, and performance (Nathanson et al., 2016). Using a ToC as a guide, teams determine if formative assessments or summative assessments are most appropriate to measure the intervention strategies, proximal outcomes, and the distal outcomes and decide which competencies to assess (Taylor et al., 2018). Given the vast amount of SEL competencies, it is helpful to use stakeholder teams to identify competencies for inclusion in the measurement, and then the two online tools, the *Assessment Work Group (AWG) Assessment Guide* and the *RAND Assessment Finder*, can assist practitioners in reviewing SEL competency assessments and selecting the most appropriate for the application (Taylor et al., 2018). Cost, administrative and analytic capacity, scalability, and reporting needs are all factors to consider prior to final selection of a tool and during implementation, it is important to establish roles and responsibilities, identify stakeholders with whom the data will be shared, determine the frequency and timeline for data collection and use, communicate the purpose of the assessment, ensure the assessment is accessible to all students and free of bias, and provide training to staff who conduct assessments and use the data (Taylor et al., 2018).

The R-Factor

SEL integration involves more than choosing a program or an assessment tool to measure its effectiveness. Jones and Bouffard (2012) "propose that schools integrate the teaching and reinforcement of SEL skills into their missions and daily interactions with students" (p. 3) making it part of all aspects of the educational experience, including academic instruction and school climate. SEL has been linked to positive school climates (Osher & Berg, 2017). Although often used interchangeably, it is important to make a distinction here between the terms school climate and school culture. Freiberg and Stein (1999) write:

> School climate is the heart and soul of a school. It is about that essence of a school that leads a child, a teacher, an administrator, a staff member to love the school and to look forward to being there each school day. School climate is about that quality of a school that helps each individual feel personal worth, dignity and importance, while simultaneously helping create a sense of belonging to something beyond ourselves. The climate of a school can foster resilience or become a risk factor in the lives of people who work and learn in a place called school (p. 11)

The National School Climate Council (2007) further explains "school climate is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" (p. 4).

Peterson and Deal (1998) offer a definition of culture that helps to uncover the difference in the terms:

> Culture is the underground stream of norms, values, beliefs, traditions, and rituals that has built up over time as people work together, solve problems, and confront challenges. This set of informal expectations and values shapes how people think, feel, and act in

> schools. This highly enduring web of influence binds the school together and makes it special. It is up to school leaders—principals, teachers, and often parents —to help identify, shape, and maintain strong, positive, student-focused cultures. Without these supportive cultures, reforms will wither, and student learning will slip (p. 28).

Tim Kight, founder of Focus 3, the organization that created the R-Factor framework, explains that "culture determines an organization's level of engagement" and it "is not a poster that hangs on a wall. Culture is what people believe, how they behave, and the experience their behavior produces for others" (Kight, 2019, p. 1). Gruenert (2008) summarizes the relationship between the terms stating that "it is much easier to change an organization's attitude (climate) than it is to change its personality (culture)" (p. 58). Culture creates the climate, which is the level of engagement and dedication to the overall mission of the organization.

The purpose of this study is to determine if the implementation of R-Factor has any effect on student SEL skills, school climate, and student discipline. Although R-Factor was not originally developed as an SEL program, Dawn Sayre, Director of Education Partnerships for Focus 3 (the company who owns R-Factor), describes the CASEL framework as the "what" of SEL and the R-Factor as the "how" of SEL (Sayre, 2019). R-Factor provides individuals with a system or a behavioral tool box to respond to the events they face in life. Its core message is Event + Response = Outcome (E+R=O); individuals do not choose the events that happen to them, but they can choose their response to elicit a better outcome ("The R Factor," 2019). There are six R-Factor disciplines. Focus 3 provided the following crosswalk (Sayre, 2019) to demonstrate the connections they believe exist between CASEL and the R-Factor. However, the connection has yet to be vetted by scholars. Furthermore, the Six Seconds' EQ competencies

assessed in this study "align closely with the skills of the CASEL model" (Stillman, et al., p. 72). The alignment provided by Six Seconds (2021) is included in the crosswalk.

- Discipline 1: Press Pause–Before responding, think and gain clarity of the event.

  CASEL alignment: self-management and self-awareness.

  Six Seconds alignment: intrinsic motivation, navigate emotions, exercise optimism, emotional literacy, recognize patterns.

- Discipline 2: Get Your Mind Right–Create the necessary mindset for responding.

  CASEL alignment: responsible decision-making and self-awareness.

  Six Seconds alignment: emotional literacy, recognize patterns, navigate emotions, consequential thinking, exercise optimism, pursue noble goals.

- Discipline 3: Step Up–Take the action needed for the desired outcome.

  CASEL alignment: Responsible decision-making and social awareness.

  Six Seconds alignment: consequential thinking, exercise optimism, pursue noble goals emotional literacy, increase empathy.

- Discipline 4: Adjust and Adapt–Be exceptional at dealing with change.

  CASEL alignment: Social awareness.

  Six Seconds alignment: emotional literacy, increase empathy.

- Discipline 5: Make a Difference–An individual's response is an event for others. Create value and give other people a great experience.

  CASEL alignment: relationship skills.

  Six Seconds alignment: increase empathy, recognize patters, navigate emotions, exercise optimism.

- Discipline 6: Build Skill–How an individual manages responses determines quality of life.

  CASEL alignment: relationship skills.

  Six Seconds alignment: increase empathy, recognize patters, navigate emotions, exercise optimism.

Sayre's (2019) crosswalk creates the basis of an R-Factor, SEL framework. Furthermore, R-Factor is a program designed for system-wide implementation and it gives students and adults the opportunity to learn and practice SEL together, which Weissberg et al. (2015) recommend. The program begins with a process of creating a Culture Playbook where primary stakeholders work through sessions to establish the core beliefs that drive the mission of the district. Next, R-Factor provides a full year of training to adults prior to releasing it to students. Jennings (2015) found that when teachers focus on their own social and emotional competencies using mindfulness strategies, it lowers their stress, improves their wellbeing, and improves the classroom learning environment. Educators can positively impact student SEL development by focusing on their own social competencies, modeling these for students, and using in their classroom management (Brackett et al., 2009; Jennings, 2015). "Teachers with stronger SEL competencies have more positive relationships with students, manage their classrooms more effectively, and implement SEL programs targeted to students with greater fidelity" (Jones et al., 2013, p. 63). R-Factor can also be implemented holistically in accordance with effective SEL implementation practices where annual SEL planning is evident at all levels, social-emotional competencies, or in this case R-Factor disciplines, are visible in all aspects of the school, and assessment is used to guide implementation (Stillman et al., 2018).

Arguably the biggest challenge of evaluating the effectiveness of a non-research based program such as the R-Factor is determining an adequate assessment tool. As has been discussed, the simple task of defining SEL is difficult in and of itself, let alone aligning a program to SEL competencies and then measuring it. Six Seconds is recognized by both *RAND Assessment Finder* and the *Assessment Work Group (AWG) Assessment Guide* as a quality, validated assessment product. According to 6seconds.org, the non-profit was originally founded in 1997 with a goal of supporting people to create positive change and it now has offices in 25 countries and members in 167 countries. Six Seconds includes benchmarks for SEL integration (Freedman et al., 2016) and assessments for students, adults, and overall school climate including the Six Seconds Emotional Intelligence Assessment-Adult Version (SEI-AV) (Freedman et al., 2005), Six Seconds Emotional Intelligence-Youth Version (SEI-YV) (Jensen, et al., 2012) and the Education Vital Signs (EVS) assessment of school climate (Freedman, Ghini, & Jensen, 2012; Freedman, Jensen, & Stillman, 2012). The specific uses and validity of the assessments are detailed in chapter three, but the significance to reference here is that the Six Seconds tools measure the social and emotional intelligence of adults and students, school climate, and group profiles, creating an assessment of overall program effectiveness.

Summary

SEL is a relatively new concept that has only been in existence since 1994 (Elias et al., 1997; Greenberg et al., 2003; Weissberg et al., 2015), but "the interest of schools and researchers in social and emotional development has been evident for over a century" (Osher et al., 2016, p. 645). Emotional intelligence is the construct that sparked the SEL movement (Salovey & Mayer, 1990) and there are several emotional intelligence theories in existence. Additionally, the intellectual roots of SEL are diverse with a broad theoretical basis in theories such as Social

Learning Theory, Cognitive Behavior Theory, Community Psychology/Sociological Theory, and Positive Youth Development Theory. As Osher et al. (2016) write:

> The SEL field has grown out of research in many fields and subfields with which educators, researchers, and policymakers are familiar, including the promotion of social competence, bullying prevention, prevention of drug use and abuse, civic and character education, emotional intelligence, conflict resolution, social skills training, and 21st-century skills (p. 644).

These factors contribute to an expansive field where there is little consensus of a definition of SEL (Humphrey et al., 2011), but many have come to accept CASEL's definition. There are also nearly 140 different SEL frameworks in existence (Berg et al., 2017). However, CASEL's broad framework has emerged as one of the most well-known and it serves as a resource for implementing school-wide SEL (Osher et al., 2016).

Although there is much theorizing about SEL, research in the field has grown tremendously (Weissberg et al., 2015). There is a general consensus that SEL is malleable and can be taught and that developing SEL skills leads to academic gains and positive student outcomes (Greenberg et al., 2003; Durlak et al., 2011). In the most frequently cited meta-analysis on the topic, Durlak et al. (2011) found that SEL programs improve students' skills, attitudes, and positive social behaviors, reduces conduct problems, and lowers emotional stress while also improving academic performance by an 11-perctile gain. SEL programs have also demonstrated the ability to improve overall school climate and to prevent negative outcomes and there is a cost benefit associated with implementing SEL.

The research has also revealed best-practices of implementation, such as the one developed by CASEL (Durlak et al., 2011) which follows the SAFE acronym and is available

online at casel.org. Additionally, Taylor et al. (2018) created an SEL assessment guide to aid in measuring SEL outcomes and Six Seconds serves as one of many in the field that is a research-based assessment to evaluate program effectiveness.

SEL began as a conceptual framework to promote social and emotional needs of students and to address the fragmentation of school efforts to meet those needs (Elias et al., 1997; Greenberg et al., 2003; Weissberg et al., 2015). As of 2015, there were over 500 research evaluations of SEL programs (Weissberg et al., 2015) and nearly all of the studies indicate that the development of SEL skills is paramount for student success in school and beyond. Unsurprisingly, educators and school administrators strongly support teaching SEL. Thus, based on the positive outcomes of SEL and support for integration into the curriculum, schools, districts, and states are adopting SEL standards and implementing programs at an increasingly fast rate.

Approximately 100 schools in Ohio have chosen to invest in the R-Factor as a program to deliver SEL. R-Factor is a six-step framework that was originally designed for business that has been adapted for the education world. The district-wide program is taught to school staff, who integrate it throughout all areas of the school experience with the goal of building a culture that improves the overall climate and promotes the growth of student SEL skills. However, there currently is no research indicating that the R-Factor is effective in achieving its purposes. Nonetheless, school districts are willing to invest significant time, money, and resources to implement the program with the hope that it will produce positive outcomes.

This research is needed to uncover the effectiveness of the R-Factor. The study will focus on a school that has implemented the R-Factor using SAFE, a proven implementation strategy combined with a quality measurement tool. The findings from this study would help educators to

determine if the R-Factor is an effective program for building student SEL skills. The findings would be valuable to school administrators to determine if the R-Factor is a viable and sustainable SEL program and to evaluate if the outcomes justify the cost of implementation.

Chapter III. Methodology

Research indicates that the development of emotional intelligence through social and emotional learning skills results in significant academic gains (Durlak et al., 2011) and positive student outcomes (Greenberg et al., 2003). Increasing SEL skills reduces classroom disruptions and creates a more positive classroom environment (Collie et al., 2012) while also improving the overall school climate (Osher & Berg, 2017). Additionally, investing in SEL produces a long-term net benefit for society (Belfield et al., 2015). The purpose of this study was to determine if the implementation of the R-Factor program has an impact on student SEL skills, school climate, and student disciplinary referrals. This chapter includes a restatement of the research questions, a summary of the research design, a description of the sample with ethical considerations, an overview of the instrumentation and data sources, specific data collection procedures, justification of the methods and tools used for data analysis, and assumptions of the study.

Research Questions

Student achievement and success after graduation are linked to social and emotional skills (Jones et al., 2015). Public schools are increasingly faced with the challenge of not only providing an academic education, but also developing the whole child. Few argue that social and emotional development is critical to success, but there is on-going research about how best to implement a quality SEL program. This study seeks to answer the following questions:

1. How does integration of the R-Factor program impact student social and emotional learning skills?
2. How does training a school staff member in R-Factor influence their opinion of school climate?
3. Does the R-Factor have any effect on student disciplinary referrals?

Research Design

The study assumes a pragmatist paradigm that there can be single or multiple realities of phenomena that are open to empirical inquiry and a mixed methods approach is best suited to uncover individual and socially shared worldviews (Creswell & Plano Clark, 2011). This study utilized a fixed mixed-methods research design in which the use of quantitative and qualitative research methods was planned from the start of the research process (Creswell & Plano Clark, 2011). A quantitative approach creates generalized and reproducible outcomes, but given the complexity of the research topic, qualitative inquiry provides a much deeper understanding of the results from the perspective of the participants involved (Creswell & Plano Clark, 2011). Creswell and Plano Clark (2011) assert that mixed-method provides a deeper understanding compared to a single method approach and it allows the researcher to study the problem in multiple ways to uncover what cannot be discovered by qualitative or quantitative alone. Additionally, the researcher used a convergent parallel mixed methods approach to develop a more complete understanding of the research problem by obtaining different but complementary data for validation purposes (Creswell & Plano Clark, 2011). Utilizing this method, quantitative and qualitative data were collected at the same time in a single phase and analyzed separately before merging the data to interpret the combined results (Creswell & Plano Clark, 2011).

For the quantitative portion of the mixed-methods study, the researcher chose a quasi-experimental design because the participant group could not be randomly assigned as is the case in a true experiment in which the study group is randomly assigned and compared to the control group (Creswell, 2009). In this case, it was impossible to randomly assign participants to the study group because all students in grades 3-12 and all staff in the single school district participated in R-Factor, and thus, there is no comparison group. Furthermore, Raimundo et al.

(2013) state, “Randomized control trials are not always feasible or practical in the school system, and insisting on them to evaluate complex social interventions can often obscure the effect of an intervention and effect external validity” (p. 177). The researcher used a quasi-experimental design to investigate the possibility of a relationship between students receiving instruction in the R-Factor program and emotional intelligence. Emotional intelligence, which results in improved social and emotional learning skills, was measured using pre and post test results on the SEI-YV, which provides subscales of the eight emotional intelligence factors. The researcher used pre and post survey results from the EVS to explore the possibility of a relationship between staff perception of school climate as a result of the implementation of the R-Factor program. The EVS measures five elements of school climate: trust, accountability, commitment, connection, and growth and four key outcomes: Learning (academic growth), Safety (physical and emotional well-being), Involvement (participation in the school community), and Thriving (long term viability of the culture). To determine if the R-Factor program has any effect on school discipline, the researcher analyzed referral rates from the year prior to the implementation of the R-Factor (2019-20) compared to rates after R-Factor implementation (2020-21). Referral data was derived from the school district student information system (SIS) called Progressbook and also known as DASL.

For the qualitative portion of the study, the researcher used a semi-structured, group interview format to further understand staff opinion of R-Factor’s impact on school climate and administrator perception of the impact on disciplinary referrals. Semi-structured interviews have guided-themes established by the researcher, but contain open-ended questions that allow new ideas to emerge through the interview process (Creswell, 2012). The researcher chose this approach because of his interpretivist ontology that reality is subjective and differs from person

to person (Scotland, 2012). Interpretivism assumes that there are multiple perspectives of an incident and generalizations cannot be created. The interpretive epistemology assumes that there are multiple realities and truths gained through individual, and subjective, experiences that are best understood from those participating in the event (Scotland, 2012). Interpretivism is often called constructionism because it is based on the individual's ability to construct meaning. It was also heavily influenced by phenomenology, which according to Merriam and Tisdell (2016), is based on the premise that "the experience a person has includes the way in which the experience is interpreted" (p. 9) and how the experience is transformed into the consciousness. And thus, the interpretivist, phenomenological approach is a good match for the research design of the qualitative portion of the study because semi-structured group interviews allow staff members to share their personal perceptions of school climate and enable administrators to share their perceptions about the impact on school discipline.

Participants & Sampling Technique

The study was conducted during the 2020-21 school year at a Mid-Western, public school. The rural school district covers 126 square miles and is comprised of four small villages. There are approximately 1,500 total students in grades K-12 and about 200 staff members. The elementary, middle school, and high school are located on one campus outside of any corporation limits. The elementary includes grades K-4, the middle school houses grades 5-8, and the high school consists of grades 9-12. There is a strong agriculture and manufacturing presence, but the community is most known for its public lake, a popular tourist attraction for camping and watersports. Waterfront property values are high, which has created a property valuation that exceeds neighboring districts. According to the Ohio Department of Education *FY2019 District Profile Report* found on the ODE website, the district assessed valuation per

pupil for tax year 2018 was $284,465.52, however, median income in the district was below the state average at $32,392 in tax year 2017 and the report lists that approximately 45% of students are considered economically disadvantaged. Additionally, 91% of students identify as white or Caucasian and 15% of students have an identified learning or other disability.

In August 2018, three head principals, three assistant principals, the athletic director, curriculum director, special education coordinator, public relations specialist, and superintendent participated in a one-day workshop provided by Tim Kight, founder of R-Factor. The team also participated in a presentation provided by a nearby school, who had implemented the program the prior school year. The consensus among the administrative team was that the R-Factor had the potential to improve and sustain staff culture while also teaching student SEL skills. The district signed a contract with Focus 3, the parent company of R-Factor, for a total two-year investment of $38,500 plus trainer travel and expenses. The Culture Playbook training, Introduction Workshop, and Certification Workshop totaled $25,000 and the Virtual Training staff licenses cost $1,000 for a total of $26,000 in year one. In the second year, the Advanced R-Factor Workshop was $7,500, Virtual Training licenses renewal was $200, and Student Content licenses were $4,800. A local manufacturing company donated $10,000 for the initiative because departments within the plant had utilized the training and company leaders felt that it would be a good program for the school staff and students. The district was also able to lower costs by an additional $8,250 by selling training seats to another school district for the Certification Workshop and Advanced Workshop. The total cost of the R-Factor after reimbursements was approximately $20,250.

On January 17, 2019, seventeen staff members with representatives from administration, teachers, and support staff attended a one-hour Culture Playbook webinar provided by Focus 3.

The same group participated in a three-hour Culture Playbook training on February 5, 2019 led by a Focus 3 trainer. The purpose of the Culture Playbook is to provide a set of beliefs, expected behaviors, and outcomes that staff, students, and the community want the school to achieve. After several correspondences through email and three additional face-to-face meetings, the team created a Culture Playbook (see Appendix A). The Culture Playbook was later adopted by the Board of Education and it was communicated to the staff, students, and community as the guiding document for the district. On June 3 and 4, 2019, sixteen staff members, many of which were on the Culture Playbook team, participated in a two-day, six hours per day R-Factor Certification workshop provided a Focus 3 trainer. The purpose of the training was to prepare and equip internal facilitators to teach the R-Factor. The training included how to use the R-Factor facilitation guide, teach backs designed for participants to practice using the content, review and guidance in conducting exercises and using the workbook and worksheets, and the sharing of best practices and lessons learned from teaching and reinforcing the program. Prior to the Certification Workshop, participants had to complete the Virtual Training, an online program that provides instruction, videos, and short quizzes on the R-Factor.

On August 19 and 20, 2019 the entire staff participated in a two-day, six-hour per day training called the Introduction Workshop. Provided by an R-Factor facilitator, the workshop included large and small group exercises, personal reflection, and instruction on the core beliefs, behaviors, and outcomes of the Culture Playbook. The primary purpose of the workshop was to engage all staff in the R-Factor program and to prepare them for the professional development that would occur during the 2019-20 school year.

All staff members received a Virtual Training content license that gave them access to the eight courses and forty curriculum modules in the online framework. Principals in each building

led monthly staff meetings during the 2019-20 school year to further reinforce the R-Factor framework and to begin preparing teachers to instruct students on the content in the 2020-21 school year. Principals did not require staff members to complete the online modules individually, but often used the modules in whole group settings to reinforce the content. Bus drivers were not able to participate in the building meetings due to contractual limitations, so they met in separate monthly meetings and a principal or the superintendent facilitated these trainings. In addition to the monthly professional development sessions, the entire staff met on October 18, 2019, January 3, 2020, and March 6, 2020 for 1.5 hours. These meetings were designed to reinforce major R-Factor concepts and to celebrate achievements. Finally, on August 7, 2020, fourteen staff members participated in an Advanced R-Factor Workshop designed to re-energize the staff about the program and to provide advanced training so that the group could serve as a support network when the R-Factor was rolled out to students.

Many of the same staff members who served on the original Culture Playbook development team and participated in the Advanced R-Factor training then served on an R-Factor advisory group during the 2020-21 school year. The team met five times during the year and frequently communicated with one another via email. The group's main purpose was to advocate and provide expertise for the R-Factor program and to communicate with the district PBIS team to ensure that the initiatives were aligned. Members created a logo to market the R-Factor. A window cling and brief description of the program was mailed to all residents of the district. Additionally, local businesses donated $6,200 and the board of education paid the remainder of the cost, to purchase R-Factor t-shirts for every student and staff member in the district. Posters containing key R-Factor concepts were also placed throughout the school

buildings and weekly updates were shared with the staff and community on the district social media website.

At an all-district staff meeting on August 17, 2020, staff received a review of the R-Factor curriculum. During the 2020-21 school year, students in grades K-12 were taught the R-Factor based on a monthly topical timeline. In September and October students learned about the Culture Playbook, ownership of their 20 square feet (a metaphor that everyone has a sphere of influence on the overall culture), discipline versus default behavior, the importance of avoiding BCD (blame, complain, defend) and E+R=O (event + response = outcome). Teachers covered the six R-Factor disciplines in the ensuing months. In November, students learned Press Pause and in December they focused on Get Your Mind Right. Step Up and Adapt and Adjust followed in January. Students learned Make a Difference and Build Skill in February and early March. Teachers concluded 2020-21 reviewing the Culture Playbook and R-Factor concepts.

Focus 3 originally created R-Factor for adults working in the private sector, therefore, the program does not provide a specific curriculum for students. Teachers created their own lessons with support from principals and the R-Factor team. At the elementary, the R-Factor curriculum was integrated into content lessons. In the middle school and high school, lessons were delivered during half-hour advisory periods that students meet in daily. The middle school and high school dedicated a minimum of two advisory periods monthly to R-Factor lessons. Although lesson strategies varied by teacher and student age, principals ensured that all students received training in the R-Factor concepts and that instruction followed the CASEL's SAFE (Sequenced, Active, Focus, Explicit) SEL guidelines (Durlak et al., 2011). Additionally, the district curriculum director, provided R-Factor lesson plans to teachers and created monthly R-Factor Tic-Tac-Toe

Challenges. Teachers who completed a minimum of three R-Factor activities per month received small rewards for their efforts.

All students in grades 3-12 participated in the SEI-YV survey in September 2020 and the same survey was administered again in March 2021. If a student score was deemed inconsistent by the SEI-YV reporting system, which is outlined in the Instrumentation and Data Sources later, it was not included in the data. Table 1 is a summary of the students who completed the surveys.

Table 1

Summary of Students Who Completed the Pre and Post SEI-YV

Grade	3	4	5	6	7	8	9	10	11	12	TOTAL
Total (n) September	82	87	103	92	127	97	91	91	67	55	892
Total (n) March	86	96	113	105	136	113	77	78	56	45	905

Staff members took the EVS climate survey in September of 2020 and again in March of 2021. Staff members who gave consent participated in this research. 100% of staff identified as White or Caucasian. Results were aggregated based on job classification. Table 2 is a summary of the staff sample.

Table 2

Summary of Staff Members Who Completed the Pre and Post EVS

Role	September 2020	March 2021	Total (n)
Teacher	104	99	203
Support Staff	29	24	53
Secretarial	9	8	17
Educational Assistant	25	26	51
Administrator	16	14	30
Total (n)	183	171	354

Criterion-based, purposeful sampling was used as the selection process for focus group interviews to understand staff opinion of the overall climate in the district after implementation of the R-Factor program. All staff members who received R-Factor training during the 2019-20 and 2020-21 school years received an email asking if they would voluntarily participate in a focus interview group. A teacher from each building, administrator from each building, and one secretary, one support staff, and one educational assistant were selected for a total of nine participants. The first to respond to the invitation in each of the classifications was selected for a semi-structured focus group interview in February 2021.

To analyze if the R-Factor has any effect on student disciplinary referrals, total student referrals from the 2019-20 and the 2020-21 school years were compared using data from September through February. The researcher established the end of February as the cut-off for referral data because students were forced to remote learning (home instruction) in March 2020 due to the COVID-19 pandemic. Additionally, teachers covered all of the R-Factor content by March 2021. The district utilizes a student information system called DASL. To protect student confidentiality, only authorized school employees have access to student information. Building principals input all student referrals into the system. DASL is capable of disaggregating data based on a variety of factors. For this study, grades 3-12 were included and data was broken down based on grade level for a quantitative comparison of total referrals for each school year. Additionally, all three principals in charge of discipline–one principal from each of the three buildings on campus–participated in a semi-structured focus group interview in February 2021 to provide their opinion of the R-Factor and disciplinary referrals.

Ethical Considerations

Approval from the University of Findlay Institutional Review Board Involving the Use of Human Subjects was obtained prior to any contact with the research participants (see Appendix B). The initial IRB application sought parent permission and student assent to include SEI-YV data in the research. However, the IRB granted an amendment allowing the researcher to include SEI-YV data without ascertaining parent permission and student assent because the data is routinely collected by the district and is pre-existing; no additional SEI-YV data was collected for purposes of this study beyond normal district processes. All participant responses and research information were kept in a secure location to maintain confidentiality. Students put their names on the SEI-YV survey, but confidentiality was protected by removing all student names prior to any published reports. Additionally, the data was not used for any grading purposes. Survey data was maintained in the password protected, Six Seconds online system and only authorized administrators could access the information.

All staff members who participated in the EVS received an email prior to the administration of the survey explaining the purpose of the study. Completing the online survey constituted their implied consent to participate (see Appendix C). Anonymity was protected because staff members did not put their names on the surveys. After completing the second (post) EVS survey, staff received an email asking for volunteers to participate in a focus group interview to better understand the results of the survey (see Appendix D). To protect the identity of the participants, the researcher only used the job classification of the participants; all names were kept anonymous.

The researcher conducted the focus group interviews with administrators in charge of student discipline. Principals received an email explaining that the purpose was to gain a better

understanding of the disciplinary referral rates before and after implementation of the R-Factor. Agreeing to participate served as implied consent. They were assured that participation was completely voluntary, they could stop at any time without consequences, and any identifying personal information would be removed from all results (see Appendix E). The recording of the focus interviews, the transcription, and any hard copies of the survey data were kept in a locked cabinet in the researcher's office. Finally, student disciplinary referral data was maintained by the researcher with names removed from the data.

Instrumentation & Data Sources

The Six Seconds Emotional Intelligence Assessment for Youth SEI-YV Version 3 (V3) was used to collect student emotional intelligence data. Six Seconds requires anyone who oversees the administration of their assessments to be a Certified SEI Assessor. The district curriculum director was a certified assessor, and therefore, oversaw the administration of the SEI-YV and Education Vital Signs (EVS) survey. Both surveys are approved by CASEL's *Assessment Guide* and the *RAND Assessment Finder.* Additionally, Six Seconds provided the researcher access to its practitioner website, which is updated frequently and houses Six Seconds program descriptions, training guidelines, and technical information.

According to the Six Seconds practitioner website, the Six Seconds model was originally developed by Anabel Jenson and Joshua Freedman in 1997 (Six Seconds, 2020a). SEI-YV was created by Anabel Jensen and Carina Fiedeldey-Van Dijk SEI-YV in 2006 as Version 1.0 and was later updated to Version 2.0, 2.1, and is currently on V3 (Six Seconds, 2020f). The survey is administered online and is scored by Six Seconds. The instrument is designed to assess emotional intelligence in children ages 7 through 18 through a self-report questionnaire format with 58 items based on a Likert-type scale from 1 to 5: 1 indicates *almost never*; 5 indicates

almost always (Six Seconds, 2020f). The survey is divided into two sections: total EQ (emotional intelligence) and Barometer Scales that together measure total EQ, the three pursuits of EQ: Know Yourself (self-awareness), Choose Yourself (self-management), and Give Yourself (self-direction), and the eight competencies of the Six Seconds EQ Model (Six Seconds, 2020f). To Know Yourself is clearly noticing what you feel and do, to Choose Yourself is doing what you mean to do, and to Give Yourself is doing it for a reason (Six Seconds, 2020a). The questionnaire assesses eight competencies, or components, of the Six Seconds EQ Model: Enhance Emotional Literacy, Recognize Patters, Apply Consequential Thinking, Navigate Emotions, Engage Intrinsic Motivation, Exercise Optimism, Increase Empathy, and Pursue Noble Goals (Six Seconds, 2020f). The Six Seconds EQ Components are outlined in Figure 1. Table 3 summarizes the Six Seconds EQ Model.

Figure 1

Six Seconds EQ Components

Note. From *Interpretation*, by Six Seconds, 2020 (https://6seconds.atlassian.net/wiki/spaces/TK2/pages/297395/Interpretation). Copyright 2020 by Six Seconds.

Table 3

Six Seconds EQ Model

Pursuit	EQ Component	Definition
Know Yourself	Enhance Emotional Literacy	Accurately identifying and interpreting both simple and compound feelings
	Recognize Patterns	Acknowledging frequently recurring reactions and behavior
Choose Yourself	Apply Consequential Thinking	Evaluating the costs and benefits of your choices
	Navigate Emotions	Assessing, harnessing, and transforming emotions as a strategic resource
	Engage Intrinsic Motivation	Gaining energy from personal values and commitments vs. being driven by external forces
	Exercise Optimism	Taking a proactive perspective of hope and possibility
Give Yourself	Increase Empathy	Recognizing and appropriately responding to others' emotions
	Pursue Noble Goals	Connecting your daily choices with your overarching sense of purpose

Note. From *Interpretation,* by Six Seconds, 2020 (https://6seconds.atlassian.net/wiki/spaces/TK2/pages/297395/Interpretation). Copyright 2020 by Six Seconds.

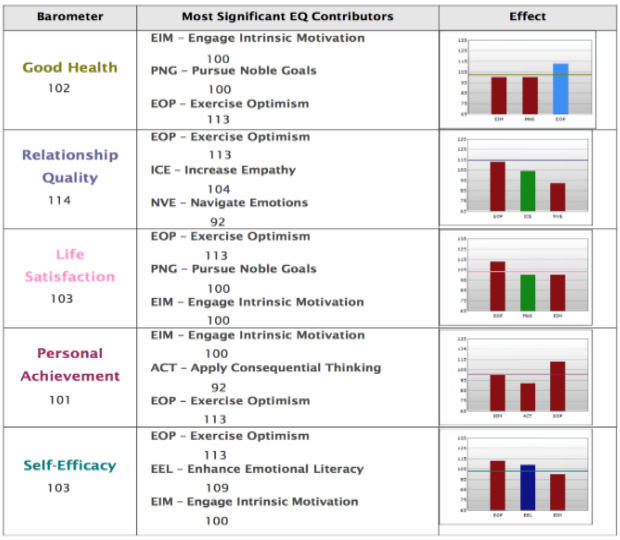
The SEI-YV provides individual Brain Brief and Brain Talent Profile for Youth results for each student, and it also provides classroom results compiled anonymously into a group report, called a Dashboard (Six Seconds, 2020a). For the purposes of this study, the eight significant EQ contributors, or the EQ components, and the overall EQ scores were used to compare pre and post assessment data.

In addition to measuring total EQ and EQ Components, the SEI-YV provides a measure of functioning in five critical areas called Life Barometers, which are indicators of the elements needed to be successful (Six Seconds, 2020c). The components of the Six Seconds EQ Model are key drivers of these Life Barometer outcomes. Good Health is valuing nutrition, feeling energized, and being able to participate physically and mentally, Relationship Quality is actively participating in a social network in a variety of ways, Life Satisfaction involves feeling content and balanced, Personal Achievement includes being diligent and conscientious and attaining successes, fulfilling commitments, and being able to consistently accomplish objectives, and Self-Efficacy is having confidence in, and knowledge of, ability to accomplish tasks, including managing expectations and moods to set and reach challenging goals (Six Seconds, 2020c).

The SEI-YV Report includes an individual EQ Yardstick chart that shows which EQ components are predictors of the different Life Barometers (Six Seconds, 2018). Each Life Barometer has an average score of 100 with a standard deviation every 15 points away from 100 (Six Seconds, 2018). The three EQ components that statistical analysis suggest are drivers of Life Barometers are aligned to show if the student's EQ is aligned with the outcomes. As is outlined in the EQ Yardstick, Figure 3, each Life Barometer is determined by the aligned EQ contributor (Six Seconds, 2018). Engage Intrinsic Motivation (EIG), Pursue Noble Goals (PNG), and Exercise Optimism (EOP) contribute to Good Health; EOP, Increase Empathy (ICE), and Navigate Emotions (NVE) contribute to Relationship Quality; EOP, PNG, and EIG contribute to Life Satisfaction; EIG, Apply Consequential Thinking (ACT), and EOP contribute to Personal Achievement; and EOP, Enhance Emotional Literacy (EEL), and EIG contribute to the Self-Efficacy Barometer (Six Seconds, 2018). Figure 2 is an example of an EQ Yardstick.

Figure 2

EQ Yardstick



Note. From *The EQ Yardsticks*, by Six Seconds, 2018 (https://6seconds.atlassian.net/wiki/spaces/TK2/pages/297377/The+EQ+Yardsticks). Copyright 2018 by Six Seconds.

The most recent statistical validation of the SEI-YV version V3 included a sample size of n = 34,312 from 2007 to 2019 (Six Seconds, 2020d). Outliers were removed for optimal credibility resulting in an effective norm base size n = 24,043 (Six Seconds, 2020d). The male-female distribution was 1:1 with female youth being slightly older at 12-13 years old and male youth around 10-11 years; the average age of the norm was 12 years old (Six Seconds, 2020d). The assessment creators recommend that score standardization is based on the norm population, and is not specific to gender or category; general population norms are required (Six Seconds, 2020d).

SEI-YV developers took steps to account for positive impression, answer style, and inconsistency (Six Seconds, 2020g). These scales were used to invalidate some of student scores in this study. The positive impression score is reported in a range that includes very low, low,

average, high, or very high and average performance and distribution of scores for this measure is similar to other EQ scales (Six Seconds, 2020g). The SEI-YV also includes an answer style index to account for answer style differences. To account for inconsistency due to a lack of focus or understanding, the SEI-YV has a test of consistency that also evaluates completion time (Six Seconds, 2020g). The assessment usually takes eight minutes to complete and individual test-taker behavior is compared to an international sample (Six Seconds, 2020g). If completion time is outside the norm, the test issues the following indicators to the assessor: extremely short – red light, short – yellow light, average – green light, long – yellow light (Six Seconds, 2020g). A density indicator evaluates the consistency with which a person selects options 1-5 on the Likert Scale and compares it to the international standard, and the system then flags the test for an inconsistency problem if one or more options is significantly overused (Six Seconds, 2020g). The system detects if the participant followed a random pattern in answering and the indicator is also linked to completion time (Six Seconds, 2020g). The density indicator and random indicator are combined into a single consistency answer index and is scored as follows: red light – low consistency (problems in one or both standards), yellow light – moderate consistency (potential problem in the random index), green light – high consistency (both indicators are normal) (Six Seconds, 2020g).

The SEI-YV measures five Life Barometers under a separate section. The scale measures concurrent validity through a multiple regression analysis and it is concurrent, not predictive, because the Life Barometer section of the survey is completed after the first section (Six Seconds, 2020c). The concurrent validity is favorable, as is demonstrated in the regression results in Table 4.

Table 4

SEI-YV Regression Results

Life Barometer	Percentage of Variance Explained
Overall	R2 = 43.73
Good Health	R2 = 15.73
Relationship Quality	R2 = 38.22
Life Satisfaction	R2 = 32.42
Personal Achievement	R2 = 26.21
Self-efficacy	R2 = 13.57

Note. From *The Life Barometers,* Six Seconds, 2020 (https://6seconds.atlassian.net/wiki/spaces/TK2/pages/297399/The+Life+Barometers). Copyright 2020 by Six Seconds.

Self-efficacy and good health are outliers because youth either have good or bad health habits and they are usually either moderately self-efficacious or slightly more (Six Seconds, 2020c). Using stepwise regression, researchers determined the top three EQ contributors to each of the five Life Barometers. Good Health - EIM Engage Intrinsic Motivation, EO Exercise Optimism, PNG Pursue Noble Goals; Relationship Quality - EIM Engage Intrinsic Motivation, EO Exercise Optimism, PNG Pursue Noble Goals; Life Satisfaction - EO Exercise Optimism, EIM Engage Intrinsic Motivation, NE Navigate Emotions; Personal Achievement - NE Navigate Emotions, IE Increase Empathy, PNG Pursue Noble Goals; Self-efficacy - EO Exercise Optimism, EIM Engage Intrinsic Motivation, NE Navigate Emotions (Six Seconds, 2020c). The beta values in the regression equations are positive, which indicates that high EQ component scores are associated with high Life Barometer scores (Six Seconds, 2020c).

Pearson Product Moment Correlation Coefficients was used to show associations between scales, which should be related, but still have some independence (Six Seconds, 2020h). The scales performed consistently across different demographics. The three EQ pursuits (Know

Yourself, Choose Yourself, Give Yourself) fell in the 0.44–0.55 range and the eight EQ components ranged between 0.25 and 0.49 with an average of 0.34 (Six Seconds, 2020h). The five Life Barometers averaged 0.44 with a range between 0.29 and 0.64 (Six Seconds, 2020h). The correlation between EQ components and the Life Barometer is 0.66 and there is a linear direct relationship between these scales (Six Seconds, 2020h).

Internal consistency is an indicator of psychometric reliability, and for the SEI-YV, internal consistency was calculated using Cronbach's coefficient alpha (Six Seconds, 2020h). The range is -1.0 to 1.0 with a positive value indicating the extent the items in a scale measure the same construct. Internal consistency measures are satisfactory (Six Seconds, 2020h). Cronbach's coefficient alpha for each factor on the SEI-YV are as follows: Enhance Emotional Literacy: 0.69, Recognize Patterns: 0.57, Apply Consequential Thinking: 0.56, Navigate Emotions: 0.57, Enhance Intrinsic Motivation: 0.66, Exercise Optimism: 0.69, Increase Empathy: 0.70, Pursue Noble Goals: 0.65, Positive Impression: 0.71, Good Health: 0.68, Life Satisfaction: 0.68, Personal Achievement: 0.69, Relationship Quality: 0.62, Self-Efficacy: 0.42 (Six Seconds, 2020h).

To evaluate school climate, staff members took the Education Vital Signs (EVS) a survey originally created in 2002 that is "a statistically validated, normed assessment of school climate" (Six Seconds, 2014, p. 2). The Six Seconds *EVS Technical Briefing* (2014) explains, that climate is "an indicator of the collective feelings, relationships, and perceptions in the learning environment. A positive culture drives engagement, unlocks collaboration, and fuels learning" (Six Seconds, p. 2). The EVS was chosen because its purpose is to provide a snapshot of a school's climate. The goal of the R-Factor is to improve culture. Culture is the underlying beliefs and values that results in a better climate.

The EVS is an online survey scored by Six Seconds that measures the five drivers of school climate: commitment, connection, accountability, growth, and trust. According to Six Seconds (2019), commitment is feeling involved and engaged in meaningful work, connection is feeling belonging as part of an inclusive community, accountability is feeling respect about behavior and following agreements, growth is feeling supported to face challenges and flourish, and trust is feeling safe and secure to be open and take positive risks. The EVS also measures four overall outcomes: learning (academic growth), safety (physical and emotional well-being), involvement (participation in the school community), and thriving (long-term viability of the culture) (Six Seconds, 2019). The survey is a five-point Likert scale ranging from *I Strongly Disagree* to *I Strongly Agree* and it includes 48 questions with the option to add custom questions. This study did not include custom questions.

The EVS has been through four validation studies with the most recent re-analysis in 2015 with norms based on 6,200 individuals (Six Seconds, 2020e). The EVS database has over 15,000 responses from over 100 schools of various sizes with a mix representation of private, public, religious and charter schools primarily in the US, Canada, and Asia (Six Seconds, 2020e). The assessment is normed and standardized with a median score of 100 and a 15-point standard deviation with a bell curve typical of psychometric assessments, and it has the strictest psychometric standards for norming meaning that results from schools can be validated against the database (Six Seconds, 2020e). The EVS has been validated through Factorial Analysis and its components render fair construct validity by together accounting for 48.18% of the common variance in EVS factor structure (Six Seconds, 2020e). Using a forward stepwise regression, the climate factors (commitment, connection, accountability, growth, and trust) predict 67.45% of the variation in a score of overall performance – a combined variable aggregating the four

outcomes (Six Seconds, 2020e). The climate factors predict significant variation of each outcome score, specifically: 58.39% of Learning, 55.14% of Involvement, 32.08% of Safety, 53.54 % of Thriving (Six Seconds, 2020e).

The internal consistency–extent to which items assigned to a test scale are correlated–is a widely used indicator of psychometric reliability and the EVS has been calculated using Cronbach's coefficient alpha ranges of 0.747-0.945 (Six Seconds, 2020e). This indicates excellent reliability for the climate factors. Good alpha ranges between 0.727 and 0.929 are also evident for the outcomes (Six Seconds, 2020e). Cronbach's coefficient alpha was used to calculate internal consistency of the EVS factors and the trust dimension. The statistic can range from 0.0 to 1.0; thus the consistency of the EVS climate factors and Trust factors are strong (Six Seconds, 2020e). The internal consistency results are as follows: Climate Factors: Commitment: 4 items = alpha .770, Connection: 4 items = alpha .810, Accountability: 4 items = alpha .747, Growth: 5 items = alpha .804, Trust: 4 items = alpha .806 and the Climate Outcomes include: Involvement: 3 items = alpha .729, Learning: 3 items = alpha .838, Safety: 3 items = alpha .727, Thriving: 3 items = alpha .875 (Six Seconds, 2020e).

The researcher compared referrals from the 2019-20 school year to the 2020-21 school year from the start of school through the end of February. The assistant principal in the elementary, middle school, and high school enter all referrals submitted by staff members into the school Student Information System known as DASL. Total referral numbers for each grade, 3-12, were entered into a spreadsheet comparing averages to determine if the numbers increased or decreased during the year of R-Factor implementation.

The researcher utilized a semi-structured focus group interview with the staff sample for the qualitative portion of the study to further understand their perception if R-Factor has any

effect on school climate. The researcher used the same semi-structured focus group interview process with the three assistant principals in charge of discipline to better understand if the R-Factor has an effect on discipline. Expert analysis established content validity of the qualitative methods.

Data Collection Procedures

The curriculum director assisted classroom teachers to administer the SEI-YV in September of 2020. This initial administration served as the pre-assessment to determine student EQ scores prior to implementation of the R-Factor curriculum. Teachers used computer labs or mobile Chromebook carts in their classrooms to administer the online student surveys. The district curriculum director, technology director, and lead researcher assisted with any technical issues. Students frequently take state assessments online, so they were proficient in the process and experienced few difficulties. The average time to complete the assessment was 20 minutes. For students who were absent on the day of the administration, the teachers administered the survey on an alternate day. The total number of participating students with valid surveys for the September pretest was n = 892 and for the March posttest was n = 905 for a total sample of n = 1,797. The Six Seconds Emotional Intelligence Network online system scored the assessments. The assessment does not ask for student grade level. Therefore, each grade was given a unique link for the assessment so that the results would be returned based on grade level and teacher classroom. The curriculum director logged into her Six Seconds account and provided the results to the researcher for further analysis. In March 2021, the same process occurred again to provide the post-assessment EQ scores after implementation of the R-Factor curriculum.

All staff members received an email during the first week of September 2020 that invited them to participate in an EVS survey (see Appendix C). The email explained that

participation was voluntary and completely anonymous. The only identifying characteristics they were asked to provide was job classification (teacher, support staff, secretarial, educational assistant, or administrator) and building (K-4, 5-8, 9-12, or district). The email contained a link for the survey and it explained that it must be completed by September 30, 2020. A follow-up, reminder email was sent exactly one-week after the initial email. The researcher informed staff that there would be a pre-survey in September and a post-survey in April to determine if the R-Factor has any effect on staff perception of school climate. They were also informed that results of the survey would be shared among district personnel and that it would appear in this dissertation. The researcher completed the same procedure again in March. On average, the surveys took about 20 minutes to complete. The curriculum director assisted the researcher in assessing the data.

During a meeting in August of 2020 with the three principals in charge of discipline, the researcher informed the principals that he would be collecting aggregate, quantitative referral data by grade level for the 2019-20 and 2020-21 school years. As the superintendent of the district, the researcher has full access to the student information system, DASL. The researcher asked principals to ensure that all data was accurate to the best of their knowledge. In March of 2021, the researcher pulled student referral data from DASL and inserted it into a Microsoft Excel spreadsheet to compare average disciplinary offenses before and after the implementation of the R-Factor.

To gather qualitative data, the researcher sent an email to the entire staff in February of 2021 asking for volunteers to participate in a semi-structured, focus group interview with the researcher to determine if staff perceives that the R-Factor has any effect on school climate (see Appendix D). The first volunteer from each classification (teacher from each building,

administrator from each building, and one secretary, one support staff, and one educational assistant) was selected for a total of nine participants. Participants were informed that the session would be audiotaped and responses would be coded and possibly published in the study, but their names would be kept anonymous. The interview occurred immediately after school in the central office board room in February 2021 and it lasted approximately 45 minutes.

In February 2021, an email was sent to the three principals in charge of student discipline and they were asked to voluntarily participate in a semi-structured, focus group interview with the researcher to discuss if the R-Factor has an effect on student discipline (see Appendix G). They were informed that although responses would be audiotaped, coded, and possibly published in the results of the study, that their names and all student names would be kept anonymous. The interview occurred in the superintendent's office and lasted approximately 45 minutes.

Data Analysis

The data analyses were both quantitative and qualitative. The researcher used the SEI-YV as a quantitative approach to address the first research question. The data for the SEI-YV was based on a Likert-type scale that yields standardized scores in three composite, eight factor, and five barometer scores that result in overall emotional intelligence. Students completed the SEI-YV in September as a pre-test, prior to learning about the R-Factor, and as post-test at the conclusion of receiving R-Factor. The independent variable was instruction in the R-Factor program and the dependent variable was the impact the R-Factor has on social and emotional skills. Using Microsoft Excel, an unpaired t-test was conducted between EI scores on the pre-test and EI scores on the post-test. The *p* value, or overall error rate, was set at 0.013.

The EVS was used as a quantitative measure to address the second research question. The EVS is a Likert-type scale that provides standardized scores in five climate factors and four key

outcomes. Staff completed the EVS in September to create a baseline score. They took it again at the end of the school year after the R-Factor program had been implemented. The independent variable was the R-Factor framework and the dependent variable was staff perception of school climate as a result of participation in the program. Using Microsoft Excel, an unpaired t-test was conducted to compare overall climate perceptions before and after implementation of the R-Factor. The error rate was controlled at the 0.02 level.

To provide quantifiable data to analyze if the R-Factor has any effect on disciplinary referrals, the researcher entered total referrals from the 2019-20 school year and the 2020-21 school year into a Microsoft Excel spreadsheet. Data came from the DASL student information system. Using descriptive statistics, the researcher calculated the mean referrals by grade and created a ratio, after adjusting for student enrollment fluctuations, of the school year prior to the R-Factor program (2019-20) to the end of the school year (2020-21) after the R-Factor content had been delivered to students. A z-test was performed and the *p* value was set at .01.

A semi-structured focus group interview was conducted with school staff to provide a qualitative analysis of the second research question (see Appendix F for a list of interview questions). Specifically, the interview was designed to further understand if the independent variable, the R-Factor training, had any effect on the dependent variable, staff opinion of school climate. The researcher recorded the interview using a digital voice recorder and uploaded it to an online transcription program called *Transcribe*, then converted the interview into a Microsoft Word Document. The document was uploaded into *MAXQDA*, a software program for organizing qualitative data. Following the advice of Taylor and Bogdan (1998), the researcher used a coding system to analyze the data. Coding is simply the process of "assigning some sort of short-hand designation to various aspects of your data so that you can easily retrieve specific

pieces of the data" (Merriam & Tisdell, 2016, p. 199). The researcher read each transcript and made notations, or open codes, throughout the documents using *MAXQDA* to track changes. Using a process that Charmaz (2014) and Corbin and Strauss (2015) call axial coding, the researcher combined the open codes utilizing the descriptive process (as cited in Merriam & Tisdell, 2016). Next, the researcher employed analytical coding, which is less descriptive and more interpretive, to reduce the number of axial codes to smaller, more abstract themes (Merriam & Tisdell, 2016). While reducing the coding scheme to more refined themes, there was an intentional effort to "make the codes fit the data and not vice versa" (Taylor & Bogdan, 1998, p. 152).

A semi-structured interview was also conducted with the three principals in charge of discipline (see Appendix G for a list of interview questions). This qualitative approach was designed to further understand if principals perceive that the R-Factor (independent variable) has any effect on student disciplinary referrals (dependent variable). Utilizing the same process outlined in the preceding paragraph, the researcher created semi-structured interview questions, recorded the interview, transcribed the data, uploaded it into *MAXQDA*, and coded the data to reveal themes. After the researcher created themes, he conducted a follow-up group meeting with the principals to complete member checks of the data.

Assumptions

The study included a variety of assumptions. It is assumed that teachers implemented the R-Factor program with consistency and fidelity and that all staff members participated in the R-Factor, used the strategies in interactions with colleagues, and modeled the principles for students. Students were expected to be engaged and active learners in the R-Factor program. It is also assumed that students who took the SEI-YV and staff members who completed the EVS

were honest in their responses. The researcher assumes that the principals who entered disciplinary data did so with consistency and integrity. Furthermore, the researcher assumes that participants in the semi-structured focus group interviews answered truthfully and were able to express their opinions accurately. It is assumed that the interviews adequately covered the themes inherent in the study.

Trustworthiness

After the overall themes emerged from the coding of the staff and principal interviews, the researcher used a process called “member checks” or “respondent” validation to solicit feedback from those interviewed (Merriam & Tisdell, 2016). The researcher met with two of the staff members who participated in the interview to determine if the initial analysis of the data supported their interpretation of school climate. The researcher met with all three principals who participated in the disciplinary referral interview. Based on feedback from the follow-up meetings, the researcher fine-tuned the themes prior to finalizing the results.

Chapter IV. Results

The results of the data analysis are presented in this chapter. This was a study of the R-Factor program and if it has any effect on student social and emotional learning skills, school climate, and student disciplinary referral rates. After school staff was trained in the R-Factor during the 2019-20 school year, teachers delivered the content to students during the 2020-21 school year. For the first research question, students in grades 3-12 took a Six Seconds SEI-YV survey in September 2020 as a pre-test before implementation of the R-Factor content and then took the same SEI-YV survey as a post-test in March 2021 after receiving R-Factor instruction. Emotional intelligence (EQ) formed the basis for the SEL movement, and therefore, EQ is a good indicator of overall SEL skills. The pre and post-test SEI-YV data of the eight significant EQ contributors and an overall EQ score were analyzed utilizing an unpaired t-test.

For research question 2, staff members took the Six Seconds Educational Vital Signs (EVS) survey in September 2020 and again in March 2021. The pre and post-test data were analyzed using an unpaired t-test to determine if R-Factor had an impact on school climate. Additionally, staff members volunteered to participate in a semi-structured focus group interview. After coding, the interview revealed themes and the results were qualitatively examined to determine if R-Factor had any effect on school climate.

For research question 3, the researcher totaled student disciplinary referral data, which had been entered into the district student information system (DASL) by principals in each building in charge of discipline for the 2019-20 school year for students in grades 3-12 from August through February. The researcher used descriptive statistics to compare the referral rates to the same time period, by grade level, during the 2020-21 school year. A ratio of referrals to students was created to account for differences in student enrollment and an unpaired z-test was

performed. Finally, principals participated in a focus group, semi-structured interview to provide a better understanding of the results. Principal responses were coded and themes emerged and the qualitative data were analyzed.

Characteristics of the Sample

For the quantitative sample for research question 1, all 3-12 grade students attending school in person were asked to complete the SEI-YV in September 2020 and March 2021. Students took the SEI-YV on Chromebooks and teachers administered the survey with the assistance of the curriculum director. If a student's score was deemed "inconsistent" on the pretest or posttest by the SEI-YV program (see chapter 3), they were given a second opportunity. If the student again scored "inconsistent" the result was removed from the sample. The student sample is provided in Table 5 below.

Table 5

Summary of SEI-YV Sample

Grade	3	4	5	6	7	8	9	10	11	12	TOTAL
September	82	87	103	92	127	97	91	91	67	55	892
March	86	96	113	105	136	113	77	78	56	45	905
Total (n)	168	183	216	197	263	210	168	169	123	100	1,797

For research question 2, all staff members in the district received an email to complete the Educational Vital Signs (EVS) survey. Voluntary completion of the survey served as consent for their results to be included in the study. Approximately 81% of the staff participated. The sample of staff members who took the EVS in September 2020 and March 2021 is outlined in Table 6 below.

Table 6

Summary of EVS Sample

Classification	Teachers	Support Staff	Secretarial	Ed. Assistants	Administrators	TOTAL
September	104	29	9	25	16	183
March	99	24	8	26	14	171
Total (n)	203	53	17	51	30	354

One principal in charge of discipline in the elementary, middle, and high school buildings input referral data into the district student information system called DASL. The researcher analyzed referral totals by grade level for students in grades 3-12 during 2019-20 and 2020-21 for the period of August through February. Due to variations of student enrollment from one school year to the next, enrollment data from February 28 of each school year was used to establish the sample and create a ratio of student enrollment to referrals issued. The enrollment grade level is provided in Table 7 below.

Table 7

Student Enrollment by Grade Level on 2/28/2020 and 2/28/2021

Grade	2019-20 Enrollment	2020-21 Enrollment
3	102	93
4	121	97
5	110	121
6	152	108
7	114	149
8	127	118
9	121	128
10	114	99
11	71	79
12	89	56
TOTAL	1,121	1,048

To ascertain a sample for the qualitative portion of research question 2, all staff members received an email invitation to participate in a focus group, semi-structured interview. The first

respondent from each job classification (teacher from each building, administrator from each building, and one secretary, one support staff, and one educational assistant) to respond to the invitation was selected for participation. An extra person showed up for the interview and asked to participate which made the sample size ten. There were three males and seven females with an age range of 33 and a median age of 43.5. The average years working in the education field was 15.5 with an average of 13.9 years working in the district where the study occurred. Demographic data is outlined in Table 8 below.

Table 8

Demographic Information of Staff in the SEI-YV Focus Group Interview

Job Classification	Gender	Age	Years in Education	Years in the District
Elementary Teacher	Female	47	23	18
Middle School Teacher	Female	59	23	23
High School Teacher	Male	40	17	17
Elementary Principal	Female	39	18	18
Middle School Principal	Female	31	9	9
High School Principal	Male	43	22	22
Secretary	Female	52	16	16
Support Staff (Bus Driver)	Female	60	18	7
Support Staff (Bus Driver)	Male	27	7	7
Educational Assistant	Female	39	2	2

Three principals in charge of discipline agreed to participate in a focus group, semi-structured interview for the qualitative portion of research question 3. Each participating principal was assigned a letter. Principal A was a male elementary co-principal who spent 33

years at the rural district and served as a co-principal for the past 9 years. Principal B was a female co-principal of 6 years employed at the rural middle school with a total of 17 years in education. Principal C was a male assistant high school principal who served in that capacity for 10 years and worked at the district for 26 years overall.

Instrument Validity and Reliability

The Six Seconds Emotional Intelligence Assessment for Youth SEI-YV Version 3 (V3) was the instrument used to collect student data for the study. Students in grades 3-12 took the SEI-YV online in September 2020 and again in March of 2021. District teachers and the curriculum director, a certified Six Seconds assessor, oversaw the administration of the SEI-YV. To determine reliability of the eight EQ contributors, the researcher calculated internal consistency using Cronbach's coefficient alpha. The internal consistency was satisfactory with a positive value, which indicates the extent the items in the scale measure the same construct. The results in Table 9 below were calculated using online software from Wessa (2017).

Table 9

Cronbach's Alpha for the SEI-YV EQ Contributors

EQ Factor	Cronbach Alpha Pretest	Cronbach Alpha Posttest
Enhance Emotional Literacy	0.7537	0.7854
Recognize Patterns	0.7511	0.7925
Apply Consequential Thinking	0.7609	0.7937
Navigate Emotions	0.7462	0.7833
Enhance Intrinsic Motivation	0.74	0.7768
Exercise Optimism	0.7427	0.8037
Increase Empathy	0.7676	0.7944
Pursue Noble Goals	0.7583	0.8068
All Items	0.7769	0.813

The Six Seconds Education Vital Signs (EVS) survey was the instrument used to collect staff data for the study. Staff members took the EVS online in September 2020 and again in March 2021. To determine reliability of the five climate factors, the researcher calculated internal consistency using Cronbach's coefficient alpha. The internal consistency was satisfactory. Wessa (2017) provided the online tool for calculating the results in Table 10.

Table 10

Cronbach's Alpha for the EVS Contributors

EQ Factor	Cronbach Alpha Pretest	Cronbach Alpha Posttest
Trust	0.9099	0.8964
Accountability	0.9186	0.9043
Commitment	0.911	0.9087
Connection	0.9231	0.8996
Growth	0.9169	0.9069
All Items	0.9315	0.9211

Disciplinary Referral data from the 2019-20 school year and the 2020-21 school year were pulled from the district student information system (DASL). In accordance with district procedures, one principal in each building—elementary, middle school, and high school—was in charge of recording the referral data in DASL for each of the respective buildings. There was no turnover in these positions, nor were there any district policy changes during the time of the study that would impact how referrals were calculated.

Research Question 1

The first research question analyzed was: *How does integration of the R-Factor program impact student social and emotional learning skills?* The null hypothesis (H_0) was that student training in the R-Factor does not impact their social and emotional learning skills. The one-sided (directional) alternative hypothesis (H_1) was that training students in R-Factor increases their

social and emotional learning skills. Quantitative data from a pre-test and post-test SEI-YV survey of students in grades 3-12 were compared. Students took the SEI-YV in September 2020 prior to beginning the R-Factor program. Teachers then taught the R-Factor program in advisory periods or as integrated class lessons from September 2020 through February 2021. Students took the same SEI-YV survey again in March 2021. The researcher input pre and posttest data for overall EQ scores and the eight EQ contributors into a Microsoft Excel Spreadsheet. An unpaired sample, one-tailed, t-test assuming equal variances was used to examine the results. The overall alpha level was set at .1. Based on the number of tests required, the Bonferroni Correction was applied resulting in a *p* value of $p<.013$. The pretest standard deviation was used as the divisor to calculate the effect size. Table 11 shows the pretest and posttest means (*M*), standard deviation (*SD*), t-test value, alpha (*p*), and effect size (ES) for each EQ contributor.

Table 11

SEI-YV Pretest and Posttest Results by EQ Category

EQ Contributor	Phase Means	*SD*	T-test Value	*p*	ES
Enhance Emotional Literacy	Pretest 98.44	14.55	-4.69	<.013	0.22
	Posttest 101.63	14.28			
Recognize Patterns	Pretest 102.75	13.99	6.29	<.013	-0.28
	Posttest 98.85	12.21			
Apply Consequential Thinking	Pretest 99.62	11.69	-4.16	<.013	0.22
	Posttest 102.25	14.88			
Navigate Emotions	Pretest 101.85	14.75	5.98	<.013	-0.27
	Posttest 97.87	13.47			
Enhance Intrinsic Motivation	Pretest 99.75	4.58	0.21	0.42	-.031

EQ Contributor	Phase Means	*SD*	T-test Value	*p*	ES
	Posttest 99.61	14.06			
Exercise Optimism	Pretest 100.14	14.18	-3.77	<.013	0.17
	Posttest 102.59	0.61			
Increase Empathy	Pretest 103.9	13.49	6.59	<.013	-.31
	Posttest 99.71	13.4			
Pursue Noble Goals	Pretest 101.18	13.03	3.44	<.013	-0.17
	Posttest 98.93	14.7			
Emotional Intelligence (overall)	Pretest 101.15	8.62	3.18	<.013	-0.18
	Posttest 99.58	11.96			

**p<.013*

The mean scores on the enhance emotional literacy contributor rose 3.19 points from the pretest to the posttest. *SD* was below 15 for both groups, indicating group alignment. The *p* value was lower than .013 indicating significance. There was a medium effect size with a score above .22. The absolute value of the t-value was less than the critical value, resulting in a failure to reject the null hypothesis; although enhance emotional intelligence decreased, R-Factor did not have a statistically significant difference on emotional literacy in this study.

Overall average scores decreased by 4.5 points on the posttest in the recognize patterns contributor. *SD* was below 15 for the pretest and posttest. The *p* value was below .013 and the t-value exceeded the critical t-value. Thus, the null hypothesis was rejected. There was medium effect size of -0.28. It appears that there is a statistically significant difference in the means of the recognize patterns contributor after implementation of the R-Factor.

The apply consequential thinking contributor average scores rose approximately 2.63 points from the pretest to the posttest. The standard deviation was below 15 on both surveys and the *p* value was *p<.013*. The t-value was less than the critical value, therefore, we must fail to reject the hypothesis. There is not a statistically significant difference in the apply consequential thinking contributor as a result of the R-Factor.

Navigate emotions mean scores dropped approximately 3.98 points on the posttest. The standard deviation of 14.75 on the pretest and 13.47 on the posttest indicate low variance of scores. The *p* value was less than 0.013 and the t-value was greater than the critical value so the null hypothesis was rejected; we can conclude that R-Factor does have an impact on navigating emotions. The effect size also fell in the medium range of -.27.

The average scores on the enhance intrinsic motivation pretest and posttest were nearly identical at 99.75 on the pretest and 99.62 on the posttest. The standard deviation on the pretest showed low variance at 4.58. It was higher on the posttest at 14.06. The *p* value exceeded .013 and the absolute value of the t-value was less than the critical value. Therefore, there is a failure to reject the hypothesis for the enhance intrinsic motivation contributor, indicating that there is no statistically significant evidence that the R-Factor had an effect on enhancing intrinsic motivation.

The exercise optimism average scores rose 2.45 from the pretest to the posttest. The standard deviation for both surveys was extremely low. The *p* value was less than .013 and the critical t-value exceeded the t-test value so we rejected the null hypothesis, indicating that the R-Factor may impact the exercise optimism contributor. However, the effect size was low.

The average increase empathy contributor experienced the largest decrease of 4.19 points on the posttest. Standard deviation for both administrations of the survey was demonstrated low

group variance at 13.49 and 13.4 respectively. The *p* value was less than .013 and the t-value exceeded the critical t-value, therefore, we reject the null hypothesis. There was also a medium negative effect size of -.31 indicating that the R-Factor may have a negative effect of increasing empathy.

In the pursue noble goals contributor, mean scores decreased by 2.25 points on the posttest. Standard deviation was 13.03 on the pretest and 14.7 on the posttest with a *p* value below .013. The t-test exceeded the critical t-value. There was a low negative effect size of -0.17. Therefore, we reject the null hypothesis; R-Factor may have a negative effect on the pursue noble goals EQ contributor.

For the overall emotional intelligence contributor, the mean emotional intelligence score on the posttest was 1.57 points lower than on the pretest and it was a highly aligned sample with an *SD* under 12 on both surveys. The results are significant with a critical *p* value of $p<.013$. The null hypothesis is rejected because the absolute value of the t-value is greater than the critical value. This indicates that the R-Factor does have an impact on student emotional intelligence. However, the effect size, or the measure of how much the R-Factor affected student emotional intelligence, is considered small at -0.18. Therefore, R-Factor has a significant, negative effect on emotional intelligence scores, but the effect size is small.

To summarize the results of research question 1, the null hypothesis that training students in R-Factor has an effect on their social and emotional learning skills is rejected. R-Factor appeared to have a statistically significant, negative effect on overall emotional intelligent scores in this study, but the effect size was small. Average posttest scores rose in only three of the eight emotional intelligence contributor categories: enhance emotional literacy, apply consequential thinking, and exercise optimism. In the enhance emotional literacy contributor, there was a

failure to reject the null hypothesis because the results were not statistically significant, although there was a medium effect size. For apply consequential thinking, the t-value was less than the critical value, so the data failed to reject the null hypothesis, indicating that the results were not statistically significant in this contributor category. There was a medium effect size for apply consequential thinking. Exercise optimism was the only EQ contributor score that increased and demonstrated statistical significance (rejected the null hypothesis). Thus, R-Factor may increase a student's ability to exercise optimism, but it should be noted that the effect size fell in the low range.

Average scores decreased in the recognize patterns and navigate emotions EQ contributors. The null hypothesis was rejected and the results were statistically significant in these categories. The R-Factor may decrease a student's ability to recognize patterns and recognize emotions and the effect size was in the medium range for both categories. Average scores decreased from the pretest to the posttest in enhance intrinsic motivation, but the researcher failed to reject the null hypothesis because the results were not statistically significant.

Increase empathy had the largest drop in average scores (4.19) from the pretest to the posttest. The null hypothesis was rejected for this contributor because the results were statistically significant. Also, increase empathy had a medium negative effect size of -.31 indicating that R-Factor may have a negative effect on this EQ contributor. Finally, the null hypothesis was rejected for pursue noble goals because there was a statistically significant finding that R-Factor affects the development of this EQ contributor, but the effect size was low.

Research Question 2

The second research question analyzed was: *How does training a school staff member in R-Factor influence their opinion of school climate?* Quantitative data from the Education Vital

Signs (EVS) was considered, along with qualitative data from a semi-structured interview with staff members. The null hypothesis (H_0) was that staff training in the R-Factor has no effect on school climate. The one-sided (directional) alternative hypothesis (H_1) was that training a school staff member in R-Factor improves school climate.

Staff received the R-Factor training during the 2019-20 school year and continued training during the 2020-21 school year. Staff were encouraged to practice the R-Factor skills in their personal and work lives, while delivering the content to students in 2020-21. In September 2020, 183 staff members took the EVS survey (pretest) and 171 staff members took the same survey (posttest) again in March 2021. According to Six Seconds (2020e), the median score for all schools on the EVS is 100 with a 15-point standard deviation. A *SD* of under 12 indicates a highly aligned group and scores over 18 represent inconsistency among respondents. The *SD* did not surpass 13.41 for any climate factor on the survey, indicating strong group alignment. The overall alpha level was set at .1 and the Bonferroni Correction was applied which resulted in a *p* value of .02. The pretest standard deviation was used as the divisor to calculate the effect size. The researcher input the data into a Microsoft Excel Spreadsheet and conducted an unpaired sample, one-tailed t-test assuming equal variances. The results are provided in Table 12.

Table 12

Staff EVS Pretest and Posttest Results

Climate Factor	Means	*SD*	T-Test Value	*p*	ES
Trust	Pretest 99.53	11.59	-1.41	.08	.14
	Posttest 101.2	10.59			
Accountability	Pretest 103.76	11.36	-.64	.26	.07
	Posttest 104.5	10.3			

Climate Factor	Means	*SD*	T-Test Value	*p*	ES
Commitment	Pretest 101.46	12.23	-.24	.41	.03
	Posttest 101.76	11.24			
Connection	Pretest 100.07	13.41	.04	.49	-.00
	Posttest 100.02	12.48			
Growth	Pretest 100.4	10.56	-1.04	.15	.11
	Posttest 101.6	9.69			

*$p<.02$

As indicated in Table 11, the average scores increased on the posttest in three of the five climate factors and scores remained nearly identical in the commitment and connection factors. The trust factor average scores raised 1.67 points on the posttest and the *SD* demonstrated low group variability on both the pretest and the posttest. The effect size was small. The *p* value was greater than .02 and the t-value was less than the critical t-value, resulting in a failure to reject the null hypothesis. There is not enough statistical certainty to accept the alternative hypothesis that the trust factor increases after training in the R-Factor.

The average accountability factor scores rose 0.74 points on the posttest. The *SD* exhibited low variance at 11.36 on the pretest and 10.3 on the posttest. The effect size was small (.07) and $p>.02$. The t-value was less than the critical t-value so there is a failure to reject the null hypothesis. The data does not suggest that the accountability factor increases as a result of the R-Factor.

The commitment factor trended closely with the accountability factor. Posttest scores rose 0.3 average points. There was low group variance with *SD* on the pretest and posttest of 12.23 and 11.24 respectively. The t-value was less than the critical t-value, .41 exceeded the

critical *p* value level, and the effect size was small. The result is a failure to reject the null hypothesis. R-Factor does not appear to have an effect on the commitment factor.

The average connection factor scores decreased on the posttest by -.05. The *SD* on the pretest was the highest of any tested area at 13.41, but still remained under the average *SD* of 15 displayed across all schools. The posttest *SD* score of 12.48 indicated low group variance. The t-value was less than the critical value, $p>.02$, and the effect size was very small. Thus, there is a failure to reject the null hypothesis and the R-Factor training did not have a significant statistical impact on the connection climate factor.

With a 1.2 average gain on the posttest, the growth climate factor demonstrated the second highest increase behind the trust factor. There was high group alignment with *SD* of 10.56 and 9.69 on the tests. The *p* value exceeded the .02 level. The t-value was less than the critical t-value and the effect size was small. Again, there was a failure to reject the null hypothesis; R-Factor does not demonstrate a significant statistical effect on the growth climate factor.

Although average scores increased in three of the five climate factors and remained nearly the same in the two other factors, the quantitative data does not exhibit statistically significant evidence that the R-Factor has an effect on climate factors. The *p* value exceeded .02 and the t-stat was less than the critical value in all climate factors. This resulted in a failure to reject the null hypothesis. The quantitative data does not suggest that the R-Factor had an effect on school climate.

Qualitative analysis through a semi-structured interview with staff members was conducted to better understand the R-Factor effect on staff opinion of school climate. The

researcher uploaded the interview transcript into MAXQDA. Axial and analytical coding was used to interpret the results and several themes emerged.

Common R-Factor Language Improved the School Climate. A theme that emerged during the interview was that common R-Factor language improved the overall school climate. A teacher said that the "continuity of vocabulary and language that we're using from K-12 is really important." A principal noted that in her building they try to use the language all of the time with both the students and the staff. The frequent use of language at school also created a deeper understanding for several participants who utilize the program at home. An educational assistant whose children attend the school explained that the family understands the "verbiage" and this makes it easier to know when her "kids need a minute to process a situation."

A high school teacher said that the common language has multiple applications. He uses it in his classroom, while coaching football, and while overseeing workouts in the weight room. It has also helped in his conversations with parents as they make the connection between his desire to help student athletes become elite in all areas of their development. For him, language plays the biggest role when he assesses staff and student buy-in of the program and he uses that information to create more support for R-Factor. He summarized, "I can tell who has bought in and who hasn't. It becomes a constant challenge to get more buy-in amongst my peers that just don't totally believe in it or the students who just haven't seen the value in it yet."

Staff Uses Specific R-Factor Strategies to Improve Climate. Staff mentioned the first R-Factor step, press pause, numerous times throughout the interview. This strategy improved school climate by reminding staff and students to stop before acting. One support staff member said that pressing pause keeps staff from saying whatever comes to mind. Another support staff member provided a personal account. She did not immediately respond to a student disruption and even

explained to another student that she used press pause to refrain from "flying off the handle." A secretary used press pause often to help her multi-task. A support staffer's daughter, who is also a student, used the press pause strategy to reduce stress.

R-Factor step two, get your mind right, and deliberately seeking the outcome one desires through the Event + Response = Outcome (E+R=O) process was also a major theme for improving school climate. A support staff member noted that the climate is better in his department because people take more time to think about how to best overcome difficult situations. One principal explained that the climate improved because people have thought about how their "R" (response) creates an "E" (event) for others. People strive to ensure that they do not create a negative "E." A middle school principal described this as a "reflective process" that staff and students can improve through repetitions. For example, a student was in her office for a disciplinary issue and without being prompted, he lamented that his "R" (response) was not right in the situation. One teacher used her response to diffuse a situation and as a teachable moment for students, when she told them that her response was not what it was supposed to be. The students and the teacher collectively brainstormed a better response. The elementary principal explained how she uses mental preparation prior to parent phone calls to plan how to reach a positive outcome. During the call, she often finds herself asking the parent to assist in finding the desired outcome. Additionally, being "fixated on a positive outcome" kept one teacher from getting defensive, which improved the climate in his classroom and on his football team.

Many interviewees noted the importance of understanding the R-Factor concept of Blame, Complain, and Defend (BCD) when seeking outcomes and improving climate. Several acknowledged that this concept has taken time to develop. It was not until halfway through the year of R-Factor implementation that teachers came to one principal and expressed their

frustration over a situation. They had waited longer than usual to speak due to a misinterpretation of BCD. They thought that they could not come to the principal with a complaint. The elementary principal explained to teachers that she wants to hear their frustrations. They can BCD, but it is not permitted unless her employees agree to collaboratively seek a better outcome. The middle school principal had a similar experience with her staff. The educational assistant strives to reverse her colleagues' BCD by encouraging them to focus on finding solutions. As one teacher noted, "I think it's a differentiation between there's a problem that needs a solution and there can be a solution versus I'm just going to complain to complain to hear my own voice to have everything be negative."

Another R-Factor strategy theme that emerged was step four, adjust and adapt. Several staff members noted how this skill was especially important during the school year due to the many changes that staff and students had to overcome. One teacher struggled with wearing a mask and switching rooms (due to the Covid-19 pandemic), but she focused on adapting and adjusting to maintain a positive attitude. A bus driver explained that his department used adjust and adapt as incentive to improve their services and to support one another. He stated, "We've done a lot of adjusting and adapting because if we've got this person off, somebody's got to cover." An educational assistant witnessed her two high school students constantly utilizing adjust and adapt to maintain optimism in the midst of various events being cancelled due to the pandemic. Most interviewees who discussed adjust and adapt also noted the power of embrace the grind as a motto to encourage adapting and adjusting. The tagline was adopted by the district as part of its R-Factor Culture Playbook. A teacher explained, "It's not that I'm going to let things go that I can't control, such as the requirement to wear a mask. I'm going to be part of the solution. So I like that phrase embrace the grind."

R-Factor Improves School Climate Because it Applies to Personal Life and the School Setting. A teacher and an educational assistant both witnessed their children using R-Factor outside of school and the teacher frequently uses it when managing stress at home. One principal overheard her husband use it with her five-year-old (a student in the district). Her husband has not been through the R-Factor training, but he has picked up the language through family conversations. "My favorite part is how all-compassing it is. I can use it in my classroom when talking to kids about history. I can then an hour later use it in the weight room talking about lifting weights," noted a high school teacher. An elementary principal said that she uses it in her personal and professional life; she is excited for students to apply it throughout their schooling career. She added, "It's so applicable to everyday life. It just makes sense."

Some Staff and Students Resist the R-Factor. Although the group consensus was that R-Factor improved school climate, several interviewees observed resistance. A support staff member said that "some staff will never try it because they have their own way of thinking." A teacher acknowledged that students complain about it being "in their face 24/7 and they tune it out after a while." The secretary agreed that students either follow R-Factor or they do not, but "the percentage is pretty high" of those that do follow it. Students also seemed to become more resistant after Christmas break, but staff was able to bring most of them back on board, according to an educational assistant. Two teachers and a principal believed that staff may have resisted early in the year because they saw it as another initiative that will blow over. They noted that consistency seems to combat this resistance. A high school teacher described "using R-Factor against R-Factor," a tactic he witnessed amongst some staff and students. They used R-Factor language to demonstrate the ineffectiveness of the program. For example, they interpreted BCD

as a way to limit staff and student voice in decision-making instead of using the strategy as intended, to elicit a better outcome.

Strategies to Improve the Effectiveness of the R-Factor. Staff offered several suggestions to improve the delivery of the R-Factor:

- Keep it simple, keep the same message, and do not add new information.
- Slow down the roll-out of the program and use next year as a review for students.
- Provide a how-to guide for staff with additional lesson plans.
- Provide public training so that students hear the same message at school, at home, and in the community.
- Promote staff buy-in through peer leadership.

Other Factors may have Contributed to a Perceived Improvement in School Climate. A common theme emerged that the Covid-19 pandemic at the end of the 2019-20 school year created an appreciation for school. Teachers worked from home and students were educated through remote, online instruction during the time period and many wanted to get back to traditional schooling. The high school principal stated, “Kids are going to do what they’re supposed to do when they’re here because they could lose it.” A teacher and an educational assistant noted that students complied with social distancing and mask-wearing rules from the beginning of the 2020-21 year with little complaint. Another teacher noted that her own child quickly gained an appreciation for school after being forced to online learning. Students followed rules and were positive because they wanted to have school so that they could have extracurricular experiences as well, according to an educational assistant.

Participants observed that parents and staff demonstrated a new appreciation for students having the opportunity to attend school. An elementary principal recalled that when school was

closed and students were being educated online due to the pandemic, several staff asked if they could come to the school to help in any way. The principal also noted that staff assumed various roles and covered countless classes for others due to higher than normal absence rates in 2020-21. She stated, “Not once did I hear any staff member complain that they had to cover this class. They all stepped up and they would say I’ll do whatever I can do to help because they wanted to be here.” Interview participants concurred that other buildings and departments experienced this same positive staff response. Additionally, a teacher and an aide both recounted how phone calls and interactions with parents seemed to be more positive throughout the year. They attributed this to parents being appreciative that school was open for their children.

Although several interviewees noted that Covid-19 may have been a factor in the perception of an improved school climate, most stated that R-Factor made a difference. The middle school principal said that R-Factor gave staff and students the strategies to cope with the pandemic and a high school teacher added, “It was the perfect time to be doing R-Factor when Covid hit.” The educational assistant explained that the consistency of R-Factor was a positive for the climate during the uncertain times. The high school principal concluded, “I think not having R Factor, we would have been in a lot tougher spot now in February than we would have been” (without the program).

The results of research question 2, *How does training a school staff member in R-Factor influence their opinion of school climate,* were mixed. The quantitative results of the staff EVS pretest and posttest indicated a failure to reject the null hypotheses. Although average posttest scores increased in three of the five climate factors and remained nearly identical in the two remaining climate factors, there was not enough statistically significant evidence to accept the alterative hypothesis, *training a school staff member in R-Factor causes their opinion of school*

climate to increase. Qualitative data from the staff focus group interview provided a different result. Staff indicated that the common, unifying language of the R-Factor improved school climate. The interviewees acknowledged specific R-Factor strategies they observed staff and students utilizing to improve the climate. They also noted that the program is effective because it can be used at school and in personal lives. All of the participants agreed that R-Factor had improved school climate, but some admitted that they had witnessed resistance from some staff and students, especially early during the implementation. The participants also provided suggestions for improving the program, but the primary focus was on keeping it the same and not allowing it to end like many educational fads. The qualitative data also suggest that other factors, such as the impact of the Covid-19 pandemic, may have improved school climate by increasing overall appreciation for the schooling process. However, most of the participants indicated that R-Factor assisted in the response to the pandemic.

Research Question 3

The third research question analyzed was: *Does the R-Factor have any effect on student disciplinary referrals?* Quantitative data from 2019-20 school year disciplinary referrals were compared to 2020-21 disciplinary referrals for grades 3-12 for the period from August through February in the respective school year. Qualitative data from a semi-structured interview with administrators in charge of discipline was also examined. The null hypothesis (H_0) was that the R-Factor does not have any effect on student disciplinary referrals. The one-sided (directional) alternative hypothesis (H_1) was that the R-Factor reduces student disciplinary referrals.

Enrollment trends fluctuate from one school year to the next. To account for this fluctuation, the sample was established for the 2019-20 school year compared to the 2020-21 based on student enrollment on February 28, 2020 to the same date in 2021. A ratio was

established by dividing the number of referrals by the student enrollment. A z-test was conducted. The overall alpha level was set at .1 and the Bonferroni Correction was applied and the critical *p* value was set at .01. The results are shown in Table 13.

Table 13

Disciplinary Referral Results

Grade	School Yr.	Enrollment	Total Referrals	Ratio	Z-Score	*p*
3	2019-20:	102	31	.30	-.6	.27
	2020-21:	93	32	.34		
4	2019-20:	121	41	.34	1.81	.035
	2020-21:	97	22	.23		
5	2019-20:	110	124	1.27	11.25	<.01
	2020-21:	121	75	.62		
6	2019-20:	152	69	.45	3.36	<.01
	2020-21:	108	27	.25		
7	2019-20:	114	39	.34	-4.10	<.01
	2020-21:	149	89	.6		
8	2019-20:	127	32	.25	1.24	.18
	2020-21:	118	22	.19		
9	2019-20:	121	111	.92	6.34	<.01
	2020-21:	128	72	.56		
10	2019-20:	114	133	1.17	15.47	<.01
	2020-21:	99	20	.20		
11	2019-20:	71	87	1.23	14.06	<.01
	2020-21:	79	10	.13		

Grade	School Yr.	Enrollment	Total Referrals	Ratio	Z-Score	*p*
12	2019-20:	89	36	.40	2.85	<.01
	2020-21:	56	10	.18		

**p<.01*

The ratio of referrals from the 2019-20 to the 2020-21 school year reduced after the implementation of the R-Factor for eight of the ten grade levels. Third grade and seventh grade experienced an increase in the ratio of referrals. Grades three, four, and eight had *p* values above .01 indicating that the results were not significant. Therefore, seventh grade was the only level that experienced a higher ratio of referrals in 2020-21 and had a significant *p* value. R-Factor resulted in lower referral rates with significant *p* values for grades five, six, nine, ten, eleven, and twelve. Therefore, the null hypothesis is rejected because R-Factor does have an effect on referral rates. The alternative hypothesis, which stated that the R-Factor reduces referral rates, is accepted because seven out of the ten grades in the sample experienced lower, statistically significant referral rates after the implementation of the R-Factor.

Qualitative analysis through a semi-structured interview with three building principals was conducted to better understand the impact of R-Factor on disciplinary referrals. The researcher uploaded the interview transcript into MAXQDA. Axial and analytical coding was utilized and several themes emerged.

R-Factor has a Positive Impact on Student Behavior and Reduces Disciplinary Referrals. All three principals noted that the R-Factor reduced disciplinary referrals in their building. Principal A commented that it does have an impact and that students "seem to take it to heart and want to use it personally." He also stated that overall it is positive and it has helped reduce office referrals. Principal C admitted that he had not specifically compared any of the numbers, but

based on the feedback from teachers and the use of his time, he would estimate that referrals are "under half of what they were prior to the implementation of R-Factor."

Importance of Common Language and Simplicity. The principals stated that R-Factor is effective at reducing referrals because it creates a common and simple language that all staff and students know and understand. Principal C stated, "The commonality and the simplicity of the language is what sets the R-Factor apart from any other program that we I've been involved in my 30 years of education." Principal B verified this theme when she said, "The language is so common that the teachers can talk to each other about what they're going to refer and what they're not." According to her, consistent expectations for staff and students to apply the R-Factor language was an additional strength. The principals also noted that the simplicity of the program reduces referrals. For example, Principal A works with K-4 students and he acknowledged that the R-Factor is simple enough that even his youngest students understand it. Perhaps more importantly, Principal C explained that the common, simple language allows "everybody to go to a phrase" to help diffuse an escalating situation.

The common language was not only applicable in the management of student discipline, but it is positive for adult interactions. Principal C said that common adult language allows them to hold each other accountable. Common language creates a stress release for adults "so we can understand and talk about (the problem) without a bunch of negativity" said Principal A. He asserted that they probably use the R-Factor language in his building more with the staff than with the students to help them manage challenges. Additionally, he hears staff talking about how they use the program and with students and one another in a process he referred to as "peer-to-peer mediation." Principal B recalled a scenario in which a staff member came to her office, shut

the door, and asked to BCD (R-Factor language referencing Blame, Complain, Defend) for a few minutes and then collaborated with the principal to seek a better outcome.

Use of R-Factor Terminology. As the principals discussed the importance of common language, a theme about the use of R-Factor terminology as it applies to student discipline emerged. All of the principals discussed Event + Response = Outcome (E+R=O) as their most frequently used terminology when addressing student behavior. More specifically, they described how staff and students are encouraged to think through scenarios to get the outcome they want. The principals mentioned press pause (R-Factor step one) and get your mind right (step two) the most during the interview. Principal A likened the steps to a time out strategy for younger students. Principal B witnessed it as positive reinforcement when a staff member commended a frustrated student who made a better choice by pressing pause and getting his mind right before acting. Additionally, while at home, she overheard her son comment to his friends during a gaming session "manage your R," which is a reference to taking the time to think through a better response. Principal C also saw the power of press pause when teachers pulled students aside to provide an opportunity for students to seek a better outcome. The principals also described step four, adapt and adjust, as a vital skill for students to avoid disciplinary action. Principal B stated that once students have the right mindset, the staff works with them on how to move on and overcome it by adapting and adjusting. Principal A and Principal B also spoke at length about Blame, Complain, Defend (BCD) and how they have told their staff that it is fine to BCD with colleagues when they are frustrated about student behavior, but they must also work together to overcome it. Principal A stated, "We know that you're going to get frustrated and you need to have a safe place to BCD." This approach reduced disciplinary referrals because it gives staff

permission to be upset when they share frustrations with one another, but when seeking an outcome, they are encouraged to press pause and get their mind right to find a better outcome.

Importance of Staff Training and Buy-In. Principal A asserted that the program's success is highly dependent on the roll-out. Providing staff training for a year prior to student implementation gave them the knowledge to apply it. Principal B concurred that, "The staff has to have time to understand it themselves before they can roll it out with kids. I think it'd be hard to do both at the same time." She also noted that the district-wide (K-12) approach strengthened the program. Principal C believed that R-Factor is most effective when adults have time to learn it and apply it both personally and professionally. He described the program as "really unique" in that it allows staff to use it at school and at home and they are able to "bounce back and forth." All three principals stated that this personal and professional application creates staff buy-in and improves the overall effectiveness.

Ways to Improve R-Factor. Although district administrators provided student lessons for teachers, the principals indicated that a full R-Factor student curriculum would assist the teachers who did not "buy-in" to the program. The principals thought it would be helpful to provide how-to videos for staff to practice using the R-Factor for common discipline occurrences. Furthermore, Principal C expressed his optimism that the program can expand to homes and businesses when the Covid-19 pandemic is over. He believes that it is most effective when staff, students, and the community see the benefits of R-Factor personally and at school. He concluded, "It will definitely change the culture of [our district] as a whole, not just [this school]."

Variables That may Have Impacted Referral Rates. Three themes emerged that may have contributed to lower referrals: combination of Positive Behavior Intervention and Supports

(PBIS) and R-Factor, more students involved in online learning, and an appreciation for school as a result of the Covid-19 pandemic. Principal C said the simultaneous roll-out of Positive Behavior Intervention and Supports (PBIS) and R-Factor at the high school improved the effectiveness of the R-Factor and had a positive impact on referrals. Principal B shared this sentiment, but offered a different reason. PBIS began in her building the year prior and she had not witnessed a difference in referrals. R-Factor provided the common language that also improved PBIS. Principal A had yet another perspective. His building had used PBIS for many years and he believes that R-Factor "blends in well with everything we've done" and that it had a "positive effect overall."

Due to the Covid-19 pandemic, approximately 9% of the district's K-12 students received instruction online and did not report to school during the first semester of 2020-21. At semester break, less than 4% remained on remote learning. Principal B and Principal C felt that some of the students who chose online learning were students who may have received more disciplinary referrals if they had been at school. Principal A felt that remote learning had little impact on his disciplinary referrals numbers because few elementary students were educated online. All principals believed that Covid-19 created a sense of appreciation for school from staff, students, and parents. School had been taken away from them in the spring of the previous year, so this may have led to an appreciation that improved behaviors and caused staff to write fewer referrals.

Summary

Considering quantitative and qualitative data, the participants revealed findings related to how the R-Factor effects student SEL, school climate, and student discipline rates. The results of the quantitative data from the SEI-YV pretest and posttest for research question 1, *how does*

integration of the R-Factor program impact student social and emotional learning skills, indicated that the R-Factor has an effect on student emotional intelligence scores, which is the driver of SEL. There was a statistically significant average decrease of 1.57 points in overall student EQ scores on the posttest compared to the pretest. Three of the eight average EQ contributor scores increased on the posttest, but exercise optimism was the only category that demonstrated statistical significance. The EQ contributors of recognize patterns, navigate emotions, and increase empathy each decreased after implementation of the R-Factor with negative medium effect sizes. Pursue noble goals decreased as well with a small negative effect size. Increase empathy had the largest drop in average scores from the pretest to the posttest and the results in this area demonstrated a medium negative effect size. Therefore, the results of this study indicated that the R-Factor may actually cause a decrease in student EQ in the first year of implementation.

A quantitative descriptive statistical analysis and a qualitative semi-structured focus group interview provided the data to answer research question 2, *how does training a school staff member in R-Factor influence their opinion of school climate?* The quantitative data from the EVS survey demonstrated an increase in posttest scores in three of the five climate factors with the other categories remaining basically the same. However, the data did not demonstrate statistical significance which resulted in a failure to reject the null hypothesis. On the contrary, the staff focus group interview revealed several qualitative themes which indicate that the R-Factor does influence staff members' opinion of school climate. For example, common R-Factor language improved the school climate, staff uses specific R-Factor strategies to improve the climate, and R-Factor improved school climate because it applies to personal life and the school setting. The focus group also revealed that staff believes that district leaders can follow specific

strategies to improve the effectiveness of the R-Factor in future years. Additionally, some staff and students resisted the program and other factors may have contributed to a perceived improvement in school climate, but the common theme amongst the interviewees was that the R-Factor has improved school climate.

Quantitative and qualitative data from a descriptive statistical analysis and interview responses helped to answer research question 3, *does the R-Factor have any effect on student disciplinary referrals?* In the quantitative analysis, seven of the ten grade levels experienced a statistically significant reduction in referrals after implementation of the R-Factor. Additionally, several categories emerged from the focus group interview with principals in charge of discipline: R-Factor has a positive impact on student behavior and reduces disciplinary referrals, importance of common language and simplicity, use of R-Factor terminology, importance of staff training and buy-in, ways to improve R-Factor, and other variables may have impacted referral rates. Chapter V will review the implications of the findings for this study and how the results are supported or contradicted by prior research. It will also provide conclusions, recommendations, limitations, and suggestions for future R-Factor research.

Chapter V. Conclusions and Recommendations

This chapter provides a discussion of the results of the study and how the findings apply to previous research in the field. The first section of the chapter is an overview of the study. It includes a review of the purpose of the study, its research questions and methodology used to conduct the study, and the results. The three research questions are reviewed. The discussion includes an interpretation of the data for each of the questions within the context of the literature. The next section provides conclusions based on interpretation of the results of the study. Following the conclusions, recommendations are included on how the study's findings could be used in the field to inform educational practices regarding the R-Factor program. The limitation section offers a summary of the factors that prevent universal acceptance of the findings. Finally, the chapter concludes with future research opportunities as it relates to implementing an R-Factor program in the school setting.

Review of the Study

The purpose of this mixed methods study was to determine if the implementation of R-Factor has any effect on student SEL skills, school climate, and student discipline. The study was grounded in emotional intelligence (EQ) theory and social emotional learning (SEL). More specifically, the SEL theoretical framework from the Collaborative for Academic, Social, and Emotional Learning (CASEL) formed the basis of this research. CASEL's framework posits that schools should foster student SEL development through the five core SEL competencies of self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The study used CASEL's theoretical framework to analyze the effectiveness of the R-Factor program. The study answered the following research questions:

1. How does integration of the R-Factor program impact student social and emotional learning skills?
2. How does training a school staff member in R-Factor influence their opinion of school climate?
3. Does the R-Factor have any effect on student disciplinary referrals?

To examine the three research questions, a mixed-methods research design was utilized. For Research Question 1, students in grades 3-12 in a Midwestern rural school completed a Six Seconds SEI-YV pretest and posttest to analyze emotional intelligence growth after learning the R-Factor program. The district administered the SEI-YV as part of its normal operations prior to the study, so there was no need for additional permission from the parents or students to participate. For Research Question 2, staff members in the district took the Six Seconds EVS pretest and posttest survey to determine if R-Factor influenced their opinion of school climate. Staff members received an email asking for their participation in the study and their voluntary completion of the survey served as consent. For Research Question 3, the researcher compared referral rates for the school year preceding R-Factor to the end of the school year when the program was implemented. All quantitative data was analyzed using descriptive statistics.

For the qualitative portion of the study, the researcher conducted focus group interviews to further analyze the second and third research questions. For Research Question 2, a semi-structured interview with a sample of ten staff members was conducted to allow members to share personal experiences related to the R-Factor and school climate. Staff volunteered for the interview by responding to an email from the researcher. To provide a qualitative inquiry of Research Question 3, the three principals in charge of discipline were asked to participate in a semi-structured interview. The format enabled principals to share their personal accounts of the

R-Factor while serving in their role of administering student discipline. Qualitative data analysis of the focus group interviews was conducted using MAXQDA to code staff experiences related to school climate and principal experiences related to student discipline as a result of the R-Factor.

Discussion

The literature indicates that SEL programming produces positive results. For example, SEL increases academic performance (Durlak et al., 2011), improves mental health and prosocial behavior (Sklad et al., 2012), is inversely predictive of police involvement and reduces the risk of substance abuse (Jones et al., 2015), and has longitudinal effects across all demographic groups and internationally (Taylor et al., 2017). In addition to increasing the likelihood of graduating and obtaining stable employment (Jones et al., 2015), Belfield et al. (2015) found that for every $1 invested in SEL programming results in a net benefit of $11 and the programs produce higher lifetime earnings for students. SEL programming is also linked to fewer classroom disruptions and a more positive classroom environment (Collie et al., 2012) and improves the overall social-emotional climates of schools (Greenberg et al., 2003). Furthermore, educators demonstrate widespread support for teaching SEL (Bridgeland et al., 2013) and legislators agree with its importance as an increasing number of states have adopted preK-12 state SEL standards (Dusenbury et al., 2018).

At the time of this study, the researcher was unaware of any literature of R-Factor's impact on student SEL, school climate, and student disciplinary referrals. Despite the absence of research to validate the program, to date, over 100 schools had implemented the R-Factor with an average cost of around $40,000. The literature supports SEL integration in schools (Durlak et al., 2011), but research specific to the R-Factor was needed to inform educational leaders to

make decisions about implementing the program. This mixed methods inquiry was analyzed through the lens of CASEL's SEL framework.

Research Question 1

For Research Question 1 (How does integration of the R-Factor program impact student social and emotional learning skills?), the researcher conducted a quantitative analysis of pretest and posttest student EQ scores assessed through the Six Seconds SEI-YV survey. The findings of this quantitative inquiry were mixed. Of the eight EQ contributors, exercise optimism was the only area that increased on the posttest and demonstrated statistical significance, although the effect size was low. Exercise optimism is taking a proactive perspective of hope and possibility (Six Seconds, 2020a). It is not surprising that R-Factor may have the potential to increase one's optimism because the primary goal of the program is to teach people that they do not control events; they only control their response to the event. Hecht (2013) may provide a possible explanation. Internal locus of control—the belief that we can change elements of our lives—is associated with optimism (Hecht, 2013). R-Factor provides a framework for responding to events, thus empowering students to react in a more disciplined manner which leads to a stronger sense of optimism.

Average scores decreased in recognize patterns, demonstrating statistical significance with a medium effect size. According to Six Seconds (2020a), recognizing patterns is acknowledging frequently recurring reactions and behavior. Wiley (2013) asserts that recognizing patterns enables people to respond to new situations thoughtfully and carefully while avoiding unconscious reactions or "autopilot." This language is similar to the R-Factor approach that encourages people to react with discipline, also known as being above the line, instead of relying on an "autopilot" default response (Kight, 2019). Although to recognize patterns and

disciplined responses are similar, the results of this study indicate that R-Factor may decrease the EQ contributor of recognize patterns. This seemingly contradictory result is confusing to the researcher, but qualitative data may provide an explanation. An interview participant observed that students became more resistant to the R-Factor after Christmas break, but felt that staff was able to re-establish buy-in from most students. The lower scores on the posttest may be a result of lost learning over a student break from school and a failure to fully regain the EQ skills they had acquired prior to administration of the March 2021 survey. Lost learning may have also contributed to lower scores in the three other EQ contributors and overall EQ.

Average scores decreased in navigate emotions and exhibited statistical significance with a medium effect size. Navigate emotions is assessing, harnessing, and transforming emotions as a strategic resource (Six Seconds, 2020a). There are many similarities between navigate emotions and get your mind right in the R-Factor framework. Get your mind right recommends taking control of the mindset cycle by focusing on where to place your attention, using intentional self-talk to feed positive emotions, recognizing how you are feeling (the emotional state), and taking action based on productive emotional energy (Kight, 2019). Even though similarities exist, a possible explanation for the reduced navigate emotions scores in this study is that R-Factor does not explicitly teach intentional naming or assessing emotions. Kircanski et al. (2012) found that the naming of emotions (affect-labeling), even unpleasant ones such as fear, may regulate aspects of emotion. Basically, if people deliberately identify emotions, they are more likely to experience a less negative response to the emotion. R-Factor does not specifically teach this process, and therefore, navigate emotions scores did not increase for participants. Furthermore, R-Factor places significant emphasis on focusing on the outcome, which teaches

students to avoid events they cannot control, which may minimize the focus on one's own emotions.

Increase empathy experienced the largest decrease in average scores of the EQ contributors and exhibited statistical significance with a medium negative effect size. Six Seconds (2020a) defines increase empathy as recognizing and appropriately responding to emotions. The present study did not specifically evaluate R-Factor's impact on empathy. However, the effort associated with expressing empathy may possibly explain the reduction in the EQ contributor. Cameron et al. (2019) found that when given a choice to share others' feelings, people avoid engaging in empathy because they perceive that it is not worth the cognitive costs to empathize. R-Factor teaches students to place their effort on a personal response to achieve the outcome they desire. In this sense, they may avoid empathy because they are primarily focused on their individual response to elicit the outcome they desire. R-Factor encourages an individual approach to events which may lead to avoiding the cognitive effort it takes to express empathy toward others.

Six Seconds (2020a) describes pursue noble goals as connecting daily choices with your overarching sense of purpose. This EQ contributor experienced a decrease in average scores on the posttest and displayed statistically significant results, but the effect size was in the low range. Bronk (2012) notes that adolescents tend to be searching for their sense of purpose and it grows over time and emerges in adulthood. Because the sample included both pre-adolescents and adolescents, the age of the participants may have impacted the pursue noble goals contributor. However, student scores were above the national norm score of 100 on the pretest, so this explanation is not complete. Nonetheless, Bronk's (2012) work may offer insight for the current results because the study revealed that a desire to connect and contribute to the world beyond-

the-self is an important factor for an adolescent to develop a sense of purpose. The R-Factor framework focuses more on individual responses using the E+R=O process to control one's 20 square feet. And thus, the major premise of R-Factor is self-control and personal development, which may cause students to initially undervalue the concept of pursuing noble goals.

R-Factor had a statistically significant, negative effect on overall emotional intelligence scores in this study with a small negative effect size. This overall finding was surprising to the researcher because the alternative hypothesis assumed that R-Factor would increase EQ and increase SEL skill development. It is plausible that student scores simply did not improve. Nonetheless, given the overall mixed results, there is also not conclusive evidence that the R-Factor decreases student EQ and SEL.

Duckworth and Yeager (2015) caution against applying non-cognitive measures for educational evaluation, but the results of the current study reveal a need for further investigation. West et al. (2016) contend that there are several flaws in non-cognitive measurement. Most convincing to the results here is the concept of reference bias, "which occurs when individual responses are influenced by differing implicit standards of comparison" (West et al., 2016, p. 151). The students in this study self-reported on the measures of EQ growth. After receiving R-Factor instruction for nearly a full school year, it is quite possible that students became more aware of their EQ and reported their skills more stringently on the posttest as a result of their training. As West et al. (2016) state, "It follows that the school environment in which they (students) spend much of their waking lives could exert a powerful influence on students' perspectives on their own attributes and abilities" (p. 152). As peers improved their EQ scores, it is possible that reference bias caused students to judge themselves against others and mark lower personal scores on the SEI-YV. Furthermore, Kruger and Dunning (1999) found that the more

competent an individual becomes in an area helps them to recognize their limitations, which again leads to a more stringent assessment of their abilities. Given the possibility that reference bias has the potential to influence EQ and SEL scores, further study is needed in this area.

Another possible explanation of why student EQ scores did not increase is that R-Factor is not adequately aligned to traditional SEL measures. The quantitative portion of this study did not specifically evaluate student growth in R-Factor teachings and practices. However, the qualitative data indicates that students improved their R-Factor skills, yet the EQ contributors did not increase. This raises a question about the validity of R-Factor as an SEL program. Focus 3 does not claim that R-Factor improves specific SEL skills. Furthermore, there is also a lack of consensus in the field for a definition of SEL (Humphrey et al., 2011) and therefore, which creates a question about what constitutes SEL growth. Although R-Factor did not demonstrate growth on the valid and reliable SLE assessment used in this study (SEI-YV), it is possible that it may have demonstrated an increase in other SEL measures. More research is needed to fully understand the interplay of R-Factor and SEL.

Research Question 2

For Research Question 2 (How does training a school staff member in R-Factor influence their opinion of school climate?), the researcher conducted a mixed methods analysis of school climate. For the quantitative portion of the research question, an EVS pretest was administered prior to the introduction of R-Factor to students and an EVS posttest after implementation. This segment of the study also included a qualitative analysis of a semi-structured staff focus group interview. The findings of this mixed methods research indicate that the R-Factor may influence school climate, but the extent of that influence is not conclusive.

The quantitative data from the EVS survey demonstrated increases in three of the five and nearly identical scores in two of the five climate factors from the pretest to the posttest after implementation of the R-Factor. Posttest scores for all factors were above the EVS normative sample average score of all schools (100). However, none of the climate factors exhibited statistical significance. Therefore, one cannot conclude that the R-Factor increases school climate, but there is no evidence that R-Factor decreases school climate.

These inconclusive results call for deeper investigation and the literature may provide additional clarity. Thapa et al. (2013) conducted an integrative review of school climate research and found that "the majority of studies do not examine the effects of school climate within multilevel/hierarchical frameworks, and very few examine school change over time, a key to understanding school improvement processes and efforts" (p. 371). Therefore, a longer timeframe than the one included in the present study is needed to better understand how R-Factor impacts school climate. Nonetheless, the increases in posttest scores after less than a full school year of the R-Factor, certainly warrants further investigation.

When evaluating school climate, a question of perspective also exists. Specifically, is climate more accurately assessed by staff or students? Brand et al. (2008) found that teachers' climate ratings are related consistently with student ratings. Therefore, it is reasonable to assume that if students had taken the EVS, their assessment of school climate would be similar to the results found in this study. While the results of this study do not indicate that training school staff members in R-Factor influences their opinion of school climate, the slight increases in posttest climate scores, combined with the likelihood that staff perceive climate comparatively to students, justifies further study.

The qualitative semi-structured interview revealed that R-Factor has a positive effect on school climate. Participants in the interview viewed common language for staff and students across all grade levels as a possible driver of school climate improvement. The importance of common language was also a theme in Research Question 3. This result is not surprising. Elias et al. (1997) assert that a common language not only assists in SEL communications, but is valuable for communicating in a wide range of programs and approaches that are in a typical school. The qualitative results supported the application of the R-Factor language in a variety of settings including the classroom, extracurricular activities, and in the home. Osher et al. (2016) acknowledge that there is no clear and common language for SEL practitioners and encourage the field to clarify terminology. However, the R-Factor program does not entertain the debate about defining social and emotional learning (Humphrey et al., 2011) and does not provide staff professional development or curricular resources to teach SEL terminology. Instead, the program establishes simple language that staff, students, and even the community understand and can apply to a variety of situations. Overall, the qualitative results indicate that the common R-Factor language led to an improved school climate.

Staff identified specific R-Factor strategies (or steps) that were especially effective at improving school climate. Pressing pause (step 1) and taking time to get your mind right (step 2) before responding were both viewed as skills that improved relations among staff members and between staff and students. These techniques kept staff from “flying off the handle” to colleagues and gave students a moment of reflection that prevented them from engaging in undesired behavior. The press pause strategy exemplifies the Self-Awareness and Self-Management competencies found in the CASEL framework. Using the E+R=O framework,

which aligns with CASEL's Responsible Decision-Making competency, kept staff and students focused on a desired outcome and improved their reactions to events.

The most significant strategy revealed through the qualitative analysis was a concept that took time to develop over the course of the year: Blame, Complain, Defend (BCD). An administrator shared that her staff began the year avoiding BCD because there was an assumption that the R-Factor prohibited it. A teacher recounted that some colleagues were threatened by BCD as an effort by administration to keep them from reporting problems. Another teacher described staff using R-Factor language and BCD as an argument against the program. However, as the year progressed, teachers and administrators noted that staff felt more comfortable sharing concerns, and staff realized that BCD is permitted if they offer a solution to the problem. Kowalski et al. (2014) may offer some insight. They found evidence that mindful people prefer to complain when it serves a purpose (Kowalski et al., 2014). One can surmise that as participants in the R-Factor study became more focused on the outcome (E+R=O), they complained (or used BCD) for a purpose. Overall, the qualitative data from the focus interview supports the concept of an improved school climate through staff utilization of R-Factor strategies.

Qualitative analysis indicates that R-Factor improved school climate because it applies to personal life and to the school setting. Durlak et al. (2011) demonstrated that programs are more effective when support extends beyond the classroom. Developing skills across contexts and environments also leads to better results (Jones & Bouffard, 2012). The district in this study followed a school-wide implementation approach (Durlak et al., 2011) and made efforts to educate the community about the program through marketing, flyers, informational literature and videos, and social media posts. Albright and Weissberg (2010) acknowledge that connecting

SEL with family partnerships increases learning opportunities across developmental contexts. Furthermore, it is important to have opportunities to practice the skills across different situations and settings (Bond & Hauf, 2004). The qualitative data indicates that staff members used the R-Factor strategies in their personal lives and witnessed students doing so as well. There was a belief among the focus group interviewees that families and community members have gained an understanding of how R-Factor applies to a variety of settings and this applicability had a positive impact on school climate.

Qualitative data revealed some resistance from staff and students toward R-Factor. One teacher felt that the constant messaging of the program caused students to "tune it out." However, the other participants in the interview saw consistency as a strength. For example, teachers initially saw the program as another initiative that will soon pass, but the consistency of including all staff and students in the school-wide approach seemed to garner buy-in. Additionally, staff members witnessed administrator support for the program and appreciated that sufficient time was dedicated to staff professional development. These results are supported by best-practices outlined in the literature including school-wide consistency, administrator support, and staff professional development (Elias et al., 2006).

Research Question 3

For Research Question 3 (Does the R-Factor have any effect on student disciplinary referrals?), the researcher conducted a quantitative analysis of disciplinary referrals pre and post R-Factor implementation and principals in charge of discipline provided qualitative responses through a semi-structured interview. The quantitative results indicate that the R-Factor has an effect on disciplinary referrals because seven out of the ten grades in the sample experienced lower referral rates after the implementation of the R-Factor. The results of these grade levels

were statistically significant even under the conservatively strict standards set at the $p<.01$ level. While third grade and seventh grade experienced increases in referral rates, third grade was not statistically significant because the results exceeded $p<.01$. Seventh grade was the only level that experienced a higher ratio of referrals in 2020-21 and was statistically significant.

Although R-Factor is not marketed as an SEL program, the parent company, Focus 3, provided a crosswalk (Sayre, 2019) to demonstrate the connections they believe exist between the most long-standing (Osher et al. 2016) SEL framework, the Collaborative for Academic, Social and Emotional Learning, and the R-Factor (see Chapter 3). The R-Factor connection to SEL has yet to be vetted by scholars, but the quantitative results of this study indicate that the R-Factor reduces student behavior problems similar to SEL. Osher et al. (2016) describes SEL as a broad area of programs including ones to prevent disruptive behavior, promote healthy choices, to highlight social responsibility, or to reduce school violence. This summary of SEL and the results of the current study support Focus 3's crosswalk that R-Factor improves SEL skills in the area of student behavior.

The results are also supported by the literature. Durlak et al. (2011) found that SEL reduces student conduct problems. SEL also has positive effects on social-emotional skills, attitudes toward self, and prosocial behavior, and reduces antisocial behavior (Sklad et al., 2012). According to Taylor et al., 2017, SEL affects positive behavior and guards against negative outcomes. The results of this study may also be applicable across multiple settings. For example, Domitrovich et al. (2017) demonstrated the positive effects of social-emotional competence across gender, ethnicity, age, risk, and location. Furthermore, social-emotional competence may have an even greater impact for lower socio-economic students (Domitrovich et al., 2017). Therefore, R-Factor's ability to reduce disciplinary referrals could be even more effective in high

economically disadvantaged settings. (The current study occurred in a school district with approximately 45% economically disadvantaged students). Further research is needed to test this hypothesis.

Three principals in charge of discipline participated in a focus group interview to provide the qualitative data for Research Question 3. The results indicated that the R-Factor reduced disciplinary referrals, a theme that supported the quantitative results. However, the principals believed that three additional variables may have impacted the results. First, the high school involved in the study was simultaneously implementing its first year of Positive Behavior Intervention and Supports (PBIS) while teaching the R-Factor curriculum. Principal C could not determine if the referral rates decreased because of PBIS or R-Factor. Principal B's building was in year two of PBIS and she felt that R-Factor helped to clarify language and expectations for staff and students. Principal A was in a building where PBIS had been in place for several years and he believed that the two programs complement one another well. These results are not surprising because Cook et al. (2015) revealed benefits of combining SEL with PBIS. Specifically, they found that combining PBIS and SEL produced significantly greater improvements in overall mental health and reductions in externalizing behaviors (Cook et al., 2015). Furthermore, Barrett et al. (2018) demonstrated that PBIS provides a framework for promoting social and emotional outcomes for students.

A second factor that may have impacted the reduction of referrals was that approximately 9% of students were forced to remote (online) learning as a result of the world-wide Covid-19 pandemic that was occurring during the study. There were 703 referrals issued in 2019-20 and 379 issued in 2020-21 which is a reduction of 46.09%. Principal C stated that remote learning removed some potential behavior problem students from the high school who may have received

a higher more referrals than typical students. Principal B agreed that it may have had an effect on the middle school, but stated that nearly all students returned to school in early January, so the impact was small. The elementary principal (Principal A) did not believe remote learning had any impact on the results.

The final factor that may have impacted the results was that staff and students had a renewed appreciation for the schooling process because they had been forced to remote learning during the final quarter of the preceding school year. This study could not account for the overlapping variables of fewer students attending school in-person and the potential increased appreciation for public schooling, and thus, further research is needed to understand the interplay of the R-Factor and school climate.

Another prevalent theme of the qualitative data was that the R-Factor created a common language and was simple to understand which led to a reduction of disciplinary referrals. This enabled staff and students of all grade levels to communicate consistent behavioral expectations. It also assisted administrators as they addressed situations with staff members. The use of common language and consistent programming is supported by the literature. Research supports a systemic, school-wide approach to implement SEL competencies (Weissberg et al., 2015; Taylor et al., 2018). Additionally, Jones and Bouffard (2012) found that programs are more effective when there is vertical alignment across grade levels and horizontal alignment across contexts and environments. The principals provided specific examples of how staff and students used R-Factor strategies both in and out of the classroom setting and even in their personal lives. Principal C was especially optimistic that the program can reach new contexts and environments by expanding into homes and the surrounding community.

The principals indicated that staff buy-in is paramount to the success of the R-Factor. Specifically, providing a full-year of staff training prior to introducing the program to students improved the effectiveness of R-Factor. This aligns with the advice of Nathanson et al. (2016) that implementation in the classroom, school, and even at the family level is increased when intervention components are delivered through training and coaching of educators. The specific approach used in this study was supported by the literature. Durlak et al. (2011) describes the SAFE SEL implementation process: Sequenced—connected and coordinated activities to foster skills development, Active—active forms of learning to help students master new skills and attitudes, Focused—emphasizes developing personal and social skills, Explicit—targets specific social and emotional skills. Specific to the results discussed here, the district in this study followed a sequenced staff training plan that gave staff confidence in the content before teaching it to the students and this led to staff buy-in. Coelho & Sousa (2017) found that pre-packaged programs with a broader focus rather than a narrow focus on each SEL competency may yield better results. R-Factor does not focus on the SEL competencies; instead, it focuses on common language and the development of specific skills for both staff and students. However, it is noteworthy that the principals believe the program could be even more effective if it provided pre-packaged programming (or curriculum) as suggested by Coelho & Sousa (2017).

Conclusion

The findings of this study were mixed. The quantitative data from Research Question 1 indicated that the R-Factor only increased one of the eight EQ contributors with statistical significance and decreased four of the areas with statistical significance. Although the sample size was small and the length of the study was less than one year, these results shed light on the R-Factor's ability to influence student EQ, a driver of SEL skills. The results do not provide

conclusive evidence that the R-Factor increases student EQ, but neither is there conclusive evidence that it decreases EQ. The findings can be used to help educational leaders make decisions about implementing the R-Factor framework. Specifically, until further research is conducted, educators may not want to use R-Factor if the primary goal is to increase student EQ and SEL in one school year.

The results provide insight of how R-Factor influences staff opinion of school climate. Although the quantitative data was not statistically significant, the EVS posttest results remained the same or increased for all five climate factors after program implementation. The qualitative findings indicate that staff believes the R-Factor has a positive influence on school climate. Data from qualitative studies are not generalizable, but this research sheds light on the EVS results. To summarize, the quantitative results do not prove that the R-Factor increases school climate, but climate scores did not decrease and the qualitative data indicates that the R-Factor increases school climate. Educational leaders should consider using the R-Factor program when designing initiatives to improve school climate.

A primary focus of R-Factor is to improve culture or climate, but the quantitative and qualitative findings of this study indicate that it may be more effective at improving student discipline. The findings provide insight for implementing the R-Factor in conjunction with existing initiatives, such as PBIS, to create a common and unifying language that reduces disciplinary referrals. Educational leaders can use the results of this research to create a school-wide approach to improve student discipline while positively impacting school climate.

Recommendations

As the world becomes increasingly more complex, K-12 schools not only have the responsibility of developing students' cognitive aptitude, but schools must also foster the growth

of non-cognitive skills so that graduates can be successful in 21st century careers. Schools should establish a safe and conducive school climate and minimize behavioral distractions so that students develop the necessary social and emotional learning skills to achieve in the classroom and beyond. As the SEL field evolves, researchers must continuously evaluate program effectiveness to assist educational leaders as they make programming and curriculum choices.

Recommendation 1. If the program is to become a viable SEL and school climate program, Focus 3, the company who founded R-Factor, should take steps to adapt the content for the educational setting. Schools are rapidly adopting SEL programs, thus, Focus 3 must adapt its content to expand in the education market. Although well over 100 schools have purchased the R-Factor, it was originally created for the business sector. The SEL field is already confusing to practitioners because there is a lack of consensus for a definition of social and emotional learning (Humphrey et al., 2011) and there are at least 136 frameworks in existence (Berg et al., 2017). Therefore, to become a notable SEL program, R-Factor should align its content and language with CASEL's five core SEL competencies.

SEL is linked to positive school climate (Osher & Berg, 2017). The terms climate and culture are often used interchangeably in education. However, R-Factor consistently uses the term culture. To effectively use R-Factor to improve school climate, Focus 3 should clarify the terms for the K-12 setting.

To fully integrate R-Factor in schools, R-Factor should provide additional support resources. Pre-packaged programs with a broader focus may be more effective (Coelho & Sousa, 2017). The qualitative results of this study reveal that teachers believe a more comprehensive curriculum with ready-made lesson plans would improve the effectiveness of the program. Therefore, R-Factor should include age-appropriate lesson plans to assist teaches.

Recommendation 2. As supported by the research, educational leaders should use a systemic, school-wide approach to implement and assess SEL competencies (Weissberg et al., 2015; Taylor et al., 2018) through the R-Factor program. Qualitative data from the present study also supports this methodology. Participants noted that training staff for a full-year before introducing content to students promoted buy-in and understanding. Additionally, including all staff and students in the curriculum created a common language that improved its overall effectiveness.

Recommendation 3. Educational leaders should also strive to integrate the R-Factor into existing initiatives such as PBIS. At least one study supports combining SEL and PBIS (Cook et al. 2015). The qualitative data from the current study appears to echo this finding. According to interviewees, R-Factor and PBIS complemented one another and encouraged common language across the school district. The R-Factor may reduce student disciplinary referrals, thus, practitioners should consider using the program in combination within existing frameworks to improve student discipline.

Limitations

This study includes several limitations. First, the researcher conducted the study in the school district where he serves as superintendent. He had a strong desire to understand the effectiveness of the R-Factor program because the district had made a significant contribution of time, money, and human resources to implement the program. There was no research available about the effectiveness of the R-Factor prior to implementation, therefore, the researcher had a professional motive to provide guidance to administrators who are considering R-Factor implementation. He sought to improve standards of the education profession by revealing these findings. Furthermore, the study is limited by the chosen sample population, which only included students and staff from one Midwestern rural school. The study is limited by the close-ended

Likert scale design of the SEI-YV and EVS surveys, a design that was chosen because it takes less time to complete and respondents are more willing to participate. Although there was opportunity for open-ended responses during the focus group interviews, these results only represented a small sample of the population of the school. Another limitation was that the researcher chose a mixed-methods design that included a qualitative approach based on a pragmatist, interpretivist, phenomenological framework. Multiple perspectives of an incident make it difficult to create generalizations. Students experience education and the schooling process differently based on their unique situations, a theoretical perspective that was interwoven throughout the study.

R-Factor was originally intended for the business world, and thus, there is no curriculum specifically designed for students. School staff had to adapt the content for students. Principals were granted freedom on how to deliver the content in their buildings. In some grade levels, the curriculum was integrated into content lessons, while at other levels, curriculum was delivered in stand-alone advisory periods. In the K-4 elementary it was primarily integrated into the curriculum and it was taught as an independent curriculum in advisory periods at the middle and high schools. Classroom teachers may have interpreted the curriculum differently depending on their own unique perspectives, which affects overall delivery and effectiveness. Aligning the curriculum according to age and ability level was largely left up to the teachers' discretion, thus limiting the ability to generalize results across all grade levels. Although all staff received the R-Factor training, fidelity of implementation was a limitation because, as with any educational initiative, some staff may not view the curriculum as worthwhile.

The study was limited to a one-year observation in the midst of other school initiatives including Positive Behavior Intervention and Supports (PBIS), a strong focus on student

wellness, and a strong national focus on SEL. To fully understand the impact of R-Factor, more implementation time may be necessary and one would have to control for other initiatives that could impact student SEL, climate, and disciplinary rates. Additionally, there is still much debate amongst researchers about defining, implementing, and measuring SEL. The Six Seconds Emotional Intelligence (SEI-YV) was used as a quantitative measure in the study to measure student EQ, but the R-Factor program was not created to specifically increase student EQ or SEL. Also, although the researcher completed a crosswalk of definitions, R-Factor, CASEL, and Six Seconds use different SEL terminology.

The R-Factor seeks to improve culture and the Six Seconds Education Vital Signs (EVS) survey in the study provides an overall quantitative measure of school climate. Climate creates culture, but terminology is a limitation in this sense. Additionally, other factors may impact the climate such as the financial health of the district, controversial community issues, and union relations. More specific to the current study, the worldwide Covid-19 pandemic had a significant impact on the district starting in March of 2020. The pandemic forced some potential behavior problem students to remote learning and it may have increased staff and student appreciation for school, thus improving the school climate and improving student behavior. The qualitative results indicate that the pandemic had a relatively minor impact on the results of the study. Nonetheless, the pandemic fundamentally changed nearly all aspects of society and the educational experience, therefore, it was an uncontrollable variable that certainly influenced the results. In addition, the quantitative statistical model of the study can only be applied to the present sample and cannot be applied universally. The qualitative interview methods used in the study provide additional insight about the experiences of those involved, but these methods do not lend themselves well to replicability.

Future Research Opportunities

The findings of this study revealed the possibility for various future research topics. First, the study occurred in a single Midwestern rural school with a predominately Caucasian staff and student body. Future research may be conducted to determine if the R-Factor creates the same effect in more urban and suburban areas with more demographic differences. Furthermore, given that social-emotional competence may have a more favorable impact for low-income students (Domitrovich et al., 2017; Durlak et al., 2011), future research should be replicated in a predominantly economically disadvantaged setting. Furthermore, the current study took place from the start of the school year through February. Future research should analyze the R-Factor over a longer time period. There is also opportunity to analyze results at follow-up; research could be conducted in the current setting several months later to determine if the results are consistent.

Future studies should also seek to include unique perspectives. For example, the current study included students in grades 3-12 as one collective group in its review of R-Factor's impact on SEL. The same is true in the analysis of school climate; the staff job classifications were analyzed as one cohort. An investigation of individual student age groups and staff work responsibilities may provide insight into how R-Factor impacts SEL and climate for similar individuals. Although the study on disciplinary referrals distinguished data by grade level, it did not account for gender differences, a variable that is ripe for further investigation.

This study revealed that R-Factor does not provide statistically significant growth in student SEL or school climate over the course of a school year. The study also did not reveal conclusive evidence that the R-Factor decreases student SEL or school climate. The factors were analyzed through two surveys from Six Seconds, the SEI-YV and the EVS. Although the

measurement tools are research-based, the terms and language used by Six Seconds and R-Factor vary. School district personnel did not make an effort to align the terminology. Therefore, future research should consider alternative assessment tools or dedicating significant time and resources during implementation to clearly defining SEL and climate terms for staff and students. Additionally, reference bias potentially impacted the results of the SEI-YV because students may have judged themselves more strictly as they became aware of their own EQ in comparison to their peers. Future research should investigate the impact of reference bias on SEL program evaluation.

The findings demonstrate that the R-Factor reduces student disciplinary referrals. However, in the current study, it was impossible to separate R-Factor from other district initiatives, especially PBIS. This creates the potential for two future research topics. First, researchers could study how combining the R-Factor with other programs makes it more or less effective at improving student discipline. Another research opportunity is to study the R-Factor in settings where PBIS has not been implemented and compare the results to PBIS districts to determine if one program, when implemented alone, is more or less effective at reducing disciplinary occurrences. In addition, the present study only reviewed disciplinary referral rates, which is only one measure of student discipline. Future research could analyze how the type and severity of student discipline is impacted by the R-Factor. Finally, a future cost-benefit investigation of the R-Factor is needed.

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Appendix A

IRB Approval

Institutional Review Board

Date: **September 9, 2020**

To: Dr. John Cindric

CC: Robert Underwood

RE: An empirical study of the r-factor and its impact on social and emotional learning and student discipline

Project Expiration date: September 9, 2021

The University of Findlay Institutional Review Board (IRB) has completed its review of your project utilizing human subjects and has granted authorization. This study has been approved for a period of one year only. The project has been assigned the number **1464**.

In order to comply with UF policy and federal regulations, human subject research must be reviewed by the IRB on at least a yearly basis. If you have not completed your research within the year, it is the investigator's responsibility to ensure that the **Progress Report** is completed and sent to the IRB in a timely fashion. The IRB needs to process the re-approval before the expiration date, which is printed above.

Please note that if any changes are made to the present study, you must notify the IRB immediately. Understand that any proposed changes may not be implemented before IRB approval, in which case you must complete an **Amendment/Modification Report.**

Following the completion of the use of human subjects, the primary investigator must complete a **Certificate of Compliance form** indicating when and how many subjects were recruited for the study.

Please refer to the IRB policy and procedures manual for additional information. Please include the project number on any other documentation or correspondence regarding the study.

Thank you very much for your cooperation. If you have any questions, please feel free to contact IRB at (419) 434-4640 or email irb@findlay.edu.

Sincerely,

Adam Larson, Ph.D.
Co-Chair, Institutional Review Board

Cc: IRB Office

University of Findlay

Institutional Review Board
Amendment/Modification Report Approval

Date: **December 16, 2020**

To: Dr. John Gillham

CC: Robert Underwood

Project #: **1464**

Project Title: An Empirical Study of the R-Factor and its Impact on Social and Emotional Learning and Student Discipline

Project Expiration date: September 9, 2021

The University of Findlay Institutional Review Board (IRB) has completed its review of your Amendment/Modification Report on your project utilizing human subjects and has granted you to continue with your research.

In order to comply with UF policy and federal regulations, human subject research must be reviewed by the IRB on at least a yearly basis. If you have not completed your research within the year, it is the investigator's responsibility to ensure that the **Progress Report** is completed and sent to the IRB in a timely fashion. The IRB needs to process the re-approval before the expiration date, which is printed above.

Following the completion of the use of human subjects, the primary investigator must complete a **Certificate of Compliance form** indicating when and how many subjects were recruited for the study.

Please refer to the IRB guidelines for additional information. Please note that if any changes are made to the present study, you must notify the IRB immediately. Please include that number on any other documentation or correspondence regarding the study.

Thank you very much for your cooperation. If you have any questions, please feel free to contact me at (419) 434-4640 or email irb@findlay.edu.

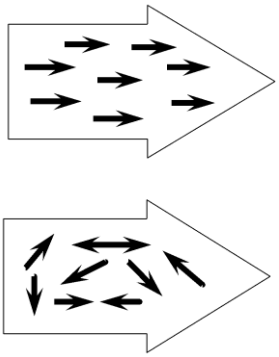
Appendix B

Culture Playbook

The School will provide a 21st century education inspiring and empowering all students to be lifelong learners.

Our culture is essential to the success of our vision and is the heart of our district. It makes this school a special place to learn, teach, and grow. We take pride in our past, where we stand today, and our plans for the future. Building and sustaining this culture requires intentional effort from everyone in the organization. Our Culture Playbook is *part* of that effort.

What is culture and why is it Important?



Culture is not a document that hangs on the wall. Culture is what we believe, how we behave, and the experience our behavior produces for others. It is the foundation on which our school district is built. Written statements help to clarify the culture, but documents don't build culture … our attitude, actions, and words do. Our core beliefs provide the expectations for how we behave toward each other. This includes everyone who is part of the school. Because culture shapes behavior, it determines how effectively we execute our mission, vision, and educational strategy. Culture eats strategy for lunch. Our success depends on the ability to collaborate and execute in a constantly changing environment. Culture aligns everyone at the school around a common set of beliefs and behaviors that ultimately determine our success.

20 Square Feet™

20 Square Feet is simply a metaphor that expresses the reality that everyone has a sphere of ownership. Each of us has responsibility for building our part of the culture and executing our part of the strategy. The way we behave personally – the way each of us manages our 20 Square Feet – is what determines our culture and the performance of our schools.

Beliefs → Behavior → Outcome (BBO)

Take a look at the Culture Playbook. You will see that each of our beliefs drives specific behaviors that produce key outcomes. Our goal is not simply to publish and promote a list of principles. Our goal is to create a learning environment where everyone consistently engages in the behaviors that produce great experiences and great outcomes.

What We Believe	How We Behave	Outcomes We Achieve
Own It	• **Learn from failure.** • **Be responsible - Own your attitude, actions, and words.** • **Make good choices.** • **Be better every day.**	**Best version of you**
Stronger Together	• **Be respectful and kind.** • **Show people you care.** • **Make others better.** • **See something, say something.**	**Stronger, Safer, Supportive Community**
Embrace the Grind	• **Adapt, Adjust, and Overcome** • **Give maximum effort.** • **Be resilient.** • **Have a growth mindset.**	**Enrolled, Enlisted, Employed, and Always Engaged**

Own It

We focus on learning, being safe, and being helpful. Own It requires a responsibility to control our actions every day.

Learn from Failure

Mistakes and failure are part of the journey and a big part of how we grow. We own our mistakes, we don't BCD, and in the process of owning them we learn from them. We view mistakes as feedback on how well our response worked. We are committed to the process of growth and we embrace the mistakes and failures that come from trying new things, learning new skills, and actively adapting to change.

Be responsible - Own your attitude, actions, and words

We impact people around us every day. Our attitude, actions, and words are our choice and they make a difference – own them. Others feel our attitude, see our actions and hear our words – make sure all three are aligned and send the message we want to send.

Make good choices.

The choices we make have a big impact on the outcomes we create. Our actions begin with a choice. Are we going to choose to be intentional, on-purpose, and skillful or impulsive, on auto-pilot, and resistant? The choice is ours to make.

Be better every day.

Don't compare yourself to others, compare yourself to how good you can be. We each start from a different place, with different talents, different experiences, and different skills. Decide who you want to be, what you want to accomplish and then work to be a little better every day. A little better today than you were yesterday and a little better tomorrow than you were today.

The Outcome We Achieve - Best Version of You

Stronger Together

We embrace differences and support one another. We have a stronger society when the school and community partner for the common good.

Be respectful and kind.

Our school is made up of people from different backgrounds and experiences. We respect these difference because we value the collective talent and knowledge that each of us possesses. We are better at solving problems and overcoming challenges when we work together. We are also kind to each other, because we care about each other. Our treatment of others determines our individual and district success.

Show people you care.

Caring is a choice and an action, not an emotion. People know we care about them when we find out what is important to the other person and make it important to them in a way that they can feel. When we invest the time to care and listen we make strong, productive connections and create a stronger team.

Make others better.

Be aware of others who need your help, and then help them. We never know the impact one simple act of helping someone can have on them. Think and act in ways that help others get better. Ask yourself, *who needs my help today and how can I help them*?
We make others better when we support each other and invest in their growth and success.

See something, say something.

Our commitment to each other exceeds our desire for comfort. Sometimes this means we have to say things we aren't comfortable saying and hear things we aren't comfortable

hearing. We don't avoid the difficult conversations, we embrace them. We don't talk about others; we talk to others. We can agree to disagree, but we do it with respect and a strong desire for the best possible outcome.

The Outcome We Achieve - Stronger, Safer, Supportive Community

Embrace the Grind

We welcome challenges. Embrace the grind is a commitment to persevere through adversity to reach our highest level of success.

Adapt, Adjust, and Overcome

Change is constant and necessary. How we deal with change determines how successful we are. Resisting change will only put us at a disadvantage. We embrace the productive discomfort required to make the necessary changes required to achieve our goals. We look for the opportunity in the change and ask ourselves, "How can I use this change to get better?" We focus on the desired outcome, not the discomfort required to make the change.

Give maximum effort.

Life will always challenge us. The bigger the goal, the more effort required to attain it. Any kind of meaningful achievement requires relentless effort. It is not a one-time event; every day we wake up focused and committed to giving our best. We are always working to achieve the next level.

Be resilient.

Growth is rarely easy and it can be a struggle. We are committed to pushing through the challenges. We accept and understand that there will be problems and obstacles and that sometimes it takes tremendous effort to overcome them. We persevere. We never quit.

Have a growth mindset.

Having a growth mindset begins with focus. Our mindset is a choice and it impacts everything we do. We choose a growth mindset focused on the solution, not the problem, enabling us to reach our goals now and in the future.

Outcome - Enrolled, Enlisted, Employed, and Always Engaged

Appendix C

Staff Email for Implied Consent to Participate in the EVS Survey

FINDLAY
THE UNIVERSITY OF FINDLAY

Institutional Review Board

Implied Consent Form

Date: September 16, 2020

Dear subject,

You are invited to participate in a study of the R-Factor program. I hope to learn without prejudice if the R-Factor has any effect on school climate. You were selected as a possible participant in this study because you are a staff member at the school where R-Factor training began during the 2019-20 school year. If you decide to participate, please complete the survey found at https://bit.ly/35FQwU6. Your completion of this online survey is implied consent. The Six Seconds Education Vital Signs (EVS) survey is designed to create a snapshot of the current school climate and the collective feelings, relationships, and perceptions in the learning environment at the school. It will take about 20 minutes to complete the survey. No benefits accrue to you for answering the survey, but your responses will be used to understand staff perception of school climate and help other educational professionals to determine if the R-Factor improves school climate. Any discomfort or inconvenience to you derives only from the amount of time taken to complete the survey.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will not be disclosed. Your decision whether or not to participate will not prejudice any future relationships with The University of Findlay or the school district. If you decide to participate, you are free to discontinue participation at any time without prejudice. You will be made aware of any information that varies from what has been provided to you and/or might affect your willingness to continue to participate in the project.

This survey and consent waiver have been approved by the Institutional Review board at The University of Findlay which guarantees that research involving human subjects follows federal regulations. If you have any questions about your rights as a human subject please contact the IRB chair, at irb@findlay.edu.

We will submit the results of this study for publication in its entirety. The unprocessed data will be destroyed 3 years after publication. If you are interested in the project results, please email me for information on retrieving the data. Please keep a copy of this email for your records. If you have any questions regarding this project feel free to contact Dr. John Gillham at gillham@findlay.edu or 419-434-5934.

This project is being completed as part of graduation requirements for superintendent Rob Underwood to complete a Doctor of Education degree. If you have any questions about the project you may contact Rob Underwood at underwoodr@ils-k12.org or 937-686-8601.

Thank you for your time.

Dr. John Gillham,
University of Findlay Professor of Education

Robert J. Underwood
Superintendent

Appendix D

Staff Email for Implied Consent to Participate in Focus Group

FINDLAY
THE UNIVERSITY OF FINDLAY

Institutional Review Board
Implied Consent Form

Date:

Dear subject,

You are invited to participate in a study of the R-Factor program. I hope to learn without prejudice if the R-Factor has any effect on school climate. You were selected as a possible participant in this study because you are a staff member at the school where R-Factor training began during the 2019-20 school year. A total of nine (9) participants (teacher from each building, administrator from each building, and one secretary, one support staff, and one educational assistant) are asked to participate in a semi-structured focus group interview lasting approximately 45 minutes to better understand the results of the Educational Vital Signs survey that staff completed in September 2020 and again in March 2021. The first to respond to underwoodr@ils-k12.org from each of the aforementioned classifications will be selected. If you decide to participate, your response to this email is implied consent. No benefits accrue to you for answering the survey, but your responses will be used to understand staff perception of school climate and it may help other educational professionals to determine if the R-Factor improves school climate. Any discomfort or inconvenience to you derives only from the amount of time taken for the interview.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will not be disclosed. Your decision whether or not to participate will not prejudice any future relationships with The University of Findlay or the school district. The interview will be conducted by superintendent, Rob Underwood. Your participation or non-participation will not impact your evaluation, position at the school, or employment status and there will be no retribution for your responses. If you decide to participate, you are free to discontinue participation at any time without prejudice. You will be made aware of any information that varies from what has been provided to you and/or might affect your willingness to continue to participate in the project.

This group interview and consent waiver have been approved by Institutional Review board at The University of Findlay which guarantees that research involving human subjects follows federal regulations. If you have any questions about your rights as a human subject please contact the IRB chair, at irb@findlay.edu.

We will submit the results of this study for publication in its entirety. The unprocessed data will be destroyed 3 years after publication. If you are interested in the project results, please email me for information on retrieving the data. Please keep a copy of this email for your records. If you have any questions regarding this project feel free to contact Dr. John Gillham at gillham@findlay.edu or 419-434-5934.

This project is being completed as part of graduation requirements for superintendent Rob Underwood to complete a Doctor of Education degree. If you have any questions about the project you may contact Rob Underwood at underwoodr@ils-k12.org or 937-686-8601.

Thank you for your time.

Dr. John Gillham,
University of Findlay
Professor of Education

Robert J. Underwood
Superintendent
University of Findlay doctoral student

Appendix E

Principal Email for Implied Consent to Participate in Focus Group

FINDLAY
THE UNIVERSITY OF FINDLAY

Institutional Review Board
Implied Consent Form

Date:

Dear subject,

You are invited to participate in a study of the R-Factor program. I hope to learn without prejudice if the R-Factor has any effect on student discipline. You were selected as a possible participant in this study because you are a principal in charge of student discipline at the school where R-Factor training began during the 2019-20 school year. You are asked to participate in a semi-structured focus group interview, consisting of three (3) principals and lasting approximately 45 minutes to better understand the disciplinary referrals for the 2019-20 and 2020-21 school years. If you decide to participate, your response to this email (underwoodr@ils-k12.org) is implied consent. No benefits accrue to you for answering the survey, but your responses will be used to understand principal perception of any effect the R-Factor may have on student discipline. Any discomfort or inconvenience to you derives only from the amount of time taken for the interview.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will not be disclosed. Your decision whether or not to participate will not prejudice any future relationships with The University of Findlay or the school. The interview will be conducted by superintendent, Rob Underwood. Your participation or non-participation will not impact your evaluation, position at the school, or employment status and there will be no retribution for your responses. If you decide to participate, you are free to discontinue participation at any time without prejudice. You will be made aware of any information that varies from what has been provided to you and/or might affect your willingness to continue to participate in the project.

This group interview and consent waiver have been approved by Institutional Review board at The University of Findlay which guarantees that research involving human subjects follows federal regulations. If you have any questions about your rights as a human subject please contact the IRB chair, at irb@findlay.edu.

We will submit the results of this study for publication in its entirety. The unprocessed data will be destroyed three (3) years after publication. If you are interested in the project results, please email me for information on retrieving the data. Please keep a copy of this email for your records. If you have any questions regarding this project feel free to contact Dr. John Gillham at gillham@findlay.edu or 419-434-5934.

This project is being completed as part of graduation requirements for superintendent Rob Underwood to complete a Doctor of Education degree. If you have any questions about the project you may contact Rob Underwood at underwoodr@ils-k12.org or 937-686-8601.

Thank you for your time.

Dr. John Gillham,
University of Findlay
Professor of Education

Robert J. Underwood
Superintendent
University of Findlay doctoral student

Appendix F

List of Semi-Structured Staff Focus Group Questions

1.) Do you think that the R-Factor training had any impact on school climate?

Response used to determine how the employee perceives school climate (dependent variable).

2.) Have you used or witnessed the use of the R-Factor framework either by adults or students at ILS? If so, explain.

Response used to determine how the employee has benefitted from the R-Factor training (independent variable).

3.) Has the R-Factor program had any effect on your interactions with colleagues and/or students?

Response used to determine how the employee perceives school climate (dependent variable).

4.) What is needed to improve the effectiveness of the R-Factor?

Response used to determine the effectiveness of the R-Factor training plan (independent variable).

Appendix G

List of Semi-Structured Principal Focus Group Questions

1.) Do you think that the R-Factor has had any effect on school discipline?

Response used to determine if the principal perceives that R-Factor has had any effect on student discipline (dependent variable).

2.) Have you seen the R-Factor utilized to manage student behavior? Explain your perception of this event.

Response used to determine if the principal perceives that R-Factor has had any effect on student discipline (dependent variable).

3.) How could the R-Factor training be improved?

Response used to determine if the principal perceives that the R-Factor program (independent variable) needs refined to improve outcomes.

4.) Are there other factors that may have contributed to your perceptions about discipline during the 2020-21 school year?

Response used to determine if the principal perceives that overall discipline (dependent variable) may have been impacted by variables beyond the R-Factor program (independent variable).