C3 INQUIRY BASED INSTRUCTION TO PROMOTE SOCIAL AND EMOTIONAL LEARNING

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ABSTRACT

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The past 30 years have witnessed unprecedented social and political polarization alongside a mental health crisis, disproportionately affecting youth and further exacerbated by the COVID-19 pandemic. Largely because of these pressures on teachers and students, and despite recent political backlash, social and emotional learning (SEL), has become ever more prominent in K-12 education. Teachers have generally supported the need for SEL, and SEL standards have been adopted into curriculum for pre-K education in all fifty states, and K-12 in more than twenty (CASEL, n.d.). Therefore, educational leaders must find avenues to support schools and teachers in upholding these new state mandates. However, there are no state mandated accountability measures for SEL, little ownership for who is responsible, and many educators do not have clear operational definitions for SEL, let alone, a consistent framework for how it can be infused into their classrooms (McCoy, 2018a). Since John Dewey, researchers have posited that inquiry-based instruction builds civic and social efficacy, outcomes paralleling social and emotional competencies, but there is a dearth of research to empirically link specific frameworks of IBI and SEL. This single group, pretest -posttest design study assessed the empirical relationships between IDM Institute participants' training and competency in C3 IBI, and their self-reported social and emotional competencies and teaching practices. Findings from paired sample t-test and correlational analyses generally supported the hypothesis that professional development and competency in C3 IBI promotes social and emotional learning. Study participants had significantly higher IBI competency, social and emotional competency (SEC) and social and emotional teaching practices after completion of the IDM Institute. Further,

participants' IBI competency was positively associated with aggregated SEC scores, social and emotional teaching practices, self-awareness, and social awareness. All correlational relationships yielded medium to large effect sizes. Lastly, participants noted to a high degree that SECs are either utilized in or promoted by each of the four dimensions of the C3 Inquiry Arc. These findings have highlighted new avenues for future research in measuring educators' competencies in IBI in tandem with social and emotional competencies and teaching practices, as well as further assessment of instrumentation validity and generalizability of conclusions.

Keywords: social and emotional learning; social and emotional competency; inquiry-based instruction; C3 Inquiry Arc; IDM Institute; social studies education;

This dissertation is dedicated to any reader who is driven to build education systems that work for the actualization of our youth, not only preparing them for the academic endeavors to come, but more importantly, to engage with others, learning, adapting and solving problems for the ongoing and dynamic demands of organizational, social and civic life. This mission begins with great teachers, and has driven my work as a teacher and scholar in this dissertation. I hope it contributes to your work as well.

ACKNOWLEDGMENTS

Standing on the shoulders of giants, I would be remiss if I did not acknowledge the people who have supported me in this challenge. Most importantly, I cannot give enough thanks to, and for the most important people in my life, my wife and three daughters; at the very least, for sacrificing my time and attention over the last few years while I climbed this mountain. To my wife and best friend, Beth, I have been blessed by your love, encouragement, patience, and self-sacrificing support through better and worse. You are the best person I know, and I pray that this contribution to education honors you as well. Thank you Ginny, Lilly and Clara, for your drawings and your notes, for always believing in me, loving me unconditionally, and your patience with my impossibly high expectations.

To my friend and mentor Nancy, who serendipitously led me to this path, and facilitated the climb through her network of inquiry-all stars, thank you. You are my model for adaptive leadership, and your pathological optimism, convincing me of the inevitability of the finish, has been more sustaining that you know.

Finally, I thank the faculty in the Leadership Studies program and my dissertation committee. I am eternally grateful for the time and energy you have all invested in my development as a teacher and scholar. I give special thanks to Dr. Galletta-Horner, the chair of this project. Your optimism and pragmatism helped me to focus a clear vision of the project and provided me the footing to finish. I have truly appreciated your ability to motivate with challenge and encouragement.

Doctoral study has been a humbling, yet empowering experience, teaching me again how blessed I am for the support of all those mentioned above, as well as the dozens of friends,

family, and curious colleagues whom I've failed to include here. My support network is my foundation, and my greatest strength, and I hope this contribution makes them proud.

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CHAPTER 1: STATEMENT OF THE PROBLEM

Introduction

To respond to chronically increasing rates of youth anxiety, depression (Twenge, 2019; Twenge et. al., 2019; Odgers & Jenson, 2020), youth hospitalization due to attempted suicide, and continued requests for a young workforce with interpersonal and problem solving skills (Pierce, 2019), K-12 education has increasingly turned to programs for social and emotional learning (SEL) (Kinkade & Hixenbaugh, 2021; Zhao, 2020). However, SEL and the associated competencies of self-awareness, self-management, social awareness, relationship skills and responsible decision-making skills (Durlak et al., 2015) are not entirely new concepts. They exemplify the *civic* and *social efficiency* for which John Dewey advocated over a century ago as aims for an educational system which might develop learner adaptability and sustain democracy (Dewey, 1916, 1938). Current research has also considered SEL a foundation for engaged citizenship (Shonert-Reichl, 2017). Recent political polarization (McCoy et. al., 2018), exacerbated by the change and isolation of the COVID-19 pandemic has brought renewed attention to how leaders in K-12 education might support students and teachers in the process of social, emotional and civic development (Ferren, 2021). Despite general support from many teachers, debate still rages over who is responsible for the SEL process, how it should be implemented in K-12 education, and which pedagogical models might be considered to deliver it. Just as John Dewey advocated student inquiry and authentic problem-solving experiences within education to reach these ends (1916, 1938), this dissertation will assess teachers' professional development and competency in inquiry-based instruction as a method to promote SEL.

The Consortium for Academic Social and Emotional Learning (CASEL), established in 1994, has defined SEL as:

> 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 (2022).

Social and emotional competencies (SEC) are the five dynamics of self-awareness, self-management, social awareness, relationship skills and responsible decision-making, which can be operationalized to measure the process of SEL (CASEL, n.d.; Durlak et al., 2015, Hadar et al., 2020). CASEL's is not the only model for SEL, however, as the most prominent model in education policy adoption (Zhao, 2020), it will outline SEL in this dissertation.

In their appraisal of the need for SEL in American schools, Oberle et al. wrote, "Parents, educators and society at large have long agreed that by the time young people graduate from high school they should have developed core academic competencies and, most notably, have become independent, socially skilled, well rounded young citizens…" (2016, p. 279).

Illustrating the felt-need posited above, SEL has gained notoriety as a research-based educational practice, associated with various measures of increased student academic performance and well-being (Durlak et al., 2011, Taylor et. al., 2017), as well as long-term indicators of civic engagement, academic achievement, professional performance, and social and psychological well-being (Jones et al., 2015). In response to this body of research, and tenets of the Every Child Succeeds Act (ESSA) of 2016, mandating school accountability for non-academic in addition to academic measures, all 50 states have adopted curriculum standards for Pre-K, and 20 have adopted them for K-12 (CASEL, n.d.) education. An absence of assessments

and accountability measures have resulted in confusion over ownership for SEL implementation. Intentional adoption of SEL has traditionally taken the form of explicit instruction through stand-alone, building and district-wide programming (Oberle et al., 2016) however, researchers and K-12 teachers have recently expressed motivations to infuse SEL into their everyday curriculum and instruction (Education First, 2016; McCoy, 2018; Voith et al., 2020; Yoder, 2014b).

Education policies supporting SEL integration have recently faced opposition, in a revived debate over the purpose of education. Concerned over various progressive initiatives for equity, safety and mental health in education, conservative groups have organized and called for a return to fundamental education (Kinkade & Hixenbaugh, 2021; Zhao, 2020). Some have gone so far as to argue that SEL "is often just a cover for progressive indoctrination of kids" (McCaughey, 2021, title). This debate may have stemmed the integration of large-scale SEL interventions during the pandemic, but the battle continues.

Despite the policy debate, SEL implementation is generally aligned with the ethics of justice and care, permeating teachers' codes of moral and ethical behavior. Dewey's theory of education for democracy was purposed for more than just technical knowledge and skills, but also to shape students' personal and social adaptation skills, preparing them for dynamic future challenges (Dewey, 1916). As he spoke to all involved in American education, Dewey was an early advocate for adaptive leadership. Unsurprisingly, research has also shown that teachers rate "care for children" highest among their professional motivators (Van Staveren, 2017). Further, the Teachers' Code of Ethics (The National Education Association, 1975) clearly emphasizes teacher professional development and efforts purposed primarily for students' self-actualization. Although the benefits of SEL have occasionally been overstated (Zhao, 2020), it would be difficult to argue that its integration into curriculum does not support students' self-actualization.

Educators' general support of SEL (McCoy, 2018; Nenonene et al., 2019, Voith et al., 2020) may help to explain why anti-SEL legislation has generally stalled in local and state legislative bodies (Kinkade & Hixenbaugh, 2021; Strozewski, 2022; Zhao, 2020). Considering general educator support for SEL, I argue that the recent policy debate adds weight to the notion that SEL implementation should be more emphasized in educator development.

Teacher professional development is clearly needed (McCoy, 2018; Schonert-Reichl et al., 2017; Voith et. al., 2020) to give K-12 teachers the knowledge and skills to implement SEL into instruction. Further, researchers have argued that teachers need opportunities to develop their own SEC to manage their own stress and emotions and productively engage with students. Teachers are "frustrated, overwhelmed, stressed and tired" (Ferren, 2021, p.1; Steiner & Woo, 2021) due to changes and stressors during the pandemic. This has been further illustrated by a teacher shortage in many regions of the country (NBCnews, 2021). SEL support and interventions may empower them to better manage their own challenges. Researchers also agree that more research is needed to better understand the preparation and professional development teachers need in order create SEL ingrained classes (Durlak et al., 2015).

In K-12 education, SEL has generally taken the form of targeted, stand-alone curriculum and school or district-wide programming (CASEL, 2017; Education First, 2016), but researchers have increasingly argued for its integration into all disciplinary curriculum and teacher practices (Oberle et al., 2016; Voith et al., 2020; Yoder, 2014). However, most teachers still do not have a clear and consistent definition for SEL, let alone the professional training and skills empowering them to teach it (Ferren, 2021; McCoy, 2018; Voith et al., 2020).Considering its association with skills necessary for students' engaged citizenship (Levine et al., 2017, Jennings & Greenberg, 2009; Schonert-Reichl et al., 2017), social studies and civic educators, might find particular

value in SEL curriculum integration, further emphasizing a need for more teacher professional development in SEL among social studies educators.

Developing research around inquiry-based instruction (IBI) may offer a solution to the problems described above. IBI can be defined as a student- centered instructional approach where students are guided through development of relevant questions and use of disciplinary concepts and tools to analyze sources, construct and communicate conclusions and arguments for the sake of informed action (NCSS, 2013). Researchers and practitioners have increasingly promoted IBI for its positive impact on students' autonomy, and social and academic skill acquisition (Saunders – Stewart et al., 2015; Spronken – Smith, 2012) without detriment to teachers' traditional disciplinary content delivery. Recently adopted by the National Council for the Social Studies, the C3 Framework for Social Studies Standards (2013) codifies a framework for collaborative inquiry, and has become the dominant framework in social studies education. C3 Inquiry aims to prepare students for informed social action and readiness for college, career and civic life, and may offer a framework through which to infuse SEL into social studies classrooms.

Problem Statement

To share the responsibility of SEL integration, regular classroom teachers need professional development experiences and pedagogical frameworks that will facilitate their own SEC growth for stress management, as well as for purposeful integration of SEL into curriculum and instruction for student development. Further research is needed to better inform educational leaders on which types of professional development experiences will facilitate teachers in meeting these needs. Teacher preparation programs have begun to address this problem (Byker et al., 2017; Hadar et al., 2020; Nenonene et al., 2019), but there is still no consistent framework to

guide teacher development and SEL infusion into various disciplinary curricula. I argue that SEL can integrate into social studies education, that it can be addressed within teacher preparation, and further, that teacher professional development in IBI may be a vehicle for SEC. Research has indicated that (a) teachers value and want to include SEL in curriculum and instruction, but need training (McCoy, 2018); (b) SEL intervention programs are expensive (Belfield et. al., 2015) with outcomes that often dissipate upon program completion; and (c) SEL might be better addressed by integrating it into pedagogical practices (Yoder, 2014). In order to integrate or "infuse" SEL into their practices, teachers need a theoretical framework for SEL development and instruction. Further, to build students' social and emotional competency (SEC), teachers need social and emotional competency themselves. (Finch, 2016; Hadar et al., 2020; Jennings & Greenberg, 2009; Nenonene et al., 2019; Schonert-Reichl et al., 2017), which again, requires training. IBI has been lauded as a vehicle for outcomes such as autonomy, motivation, collaboration and critical thinking (Byker et al., 2017; Colclasure, 2020; Dague, 2020; Dewey, 1916, p. 87-89; Martell, 2019; O'Steen, 2008; Saunders-Stewart et. al., 2015; UtahSBE, 2020), which are associated with SEL. However, research has not yet explicitly linked specific models of IBI and SEL (Pedaste, 2015). Lastly, researchers have called for more study into the outcomes of IBI, outside of the confines of content delivery (Colclasure, 2020) such as SEL. In summary, we know that teachers need SEC and a pedagogical framework through which to guide SEL. We also know that IBI has shown outcomes associated with SEL. Research is needed to assess if a specific model of IBI is associated with outcomes defined by a specific model of SEL.

Theoretical Foundations and Gaps in Literature

More research is needed to inform educational leadership, because policy makers have once again realized that education must be both, as John Dewey argued, progressive and moral,

and that the process of education matters just as much as the outcome (1916, 1938). Dewey's theory of education for democracy provides a conceptual framework for the proposed study. In terms of method, Dewey supported technical education integrated with a variety of experiences, compelling learners to investigate, collaborate, and solve authentic problems, which will be operationalized in this study by IBI. In regards to theoretical objectives, Dewey argued that his educational model would give students the capacity for future learning, with the social and civic efficiency to adapt for future challenges of society and democracy (1916, 1938). Contemporarily, I equate this outcome to learner readiness for college, career and civic life, operationalized in the proposed methodologies as social and emotional competency (SEC).

To test a relationship between IBI and SEC, this study will utilize the IBI model outlined in the College, Career and Civic life (C3) Framework for Social Studies Standards (NCSS, 2013), also called the C3 Inquiry Arc. According to this model, IBI is a dynamic process that takes place over the course of four dimensions of student action: developing questions, applying disciplinary concepts and tools, analyzing and evaluating sources, and communicating conclusions and taking action. The C3 Inquiry Arc prioritizes collaboration with diverse peers in order to solve problems within every dimension of inquiry (NCSS, 2013), which may offer students and teachers opportunities for SEL. As noted earlier, this study will utilize CASEL's model of SEL, measured by teachers' SEC. The current study will explore the relationships between SEC and C3 IBI.

Researchers have identified "best" curricular and instructional practices associated with SEL, yet a comprehensive pedagogical framework to deliver it has not been tested (Yoder, 2014). The C3 Model of IBI is a comprehensive pedagogical framework for social studies skills and content delivery, yet the literature around it has only brought theoretical support for its

association with SEL outcomes. The current study will investigate the empirical connections between teachers' professional development and competency in C3 IBI and SEL outcomes.

Study Overview

The proposed quantitative study will utilize a single-group pretest -posttest design to determine if competency and training in IBI is positively related to teacher SEC and social and emotional teaching practices. Participants in a two-day summer *Inquiry Design Model (IDM) Institute* will be surveyed before and after their participation in this training to assess any changes in self-reported competency in IBI and SEC. Response data will be collected by a researcher-created survey instrument, combining previously validated instrumentation to measure self-reported IBI competency, and social and emotional competencies and teaching practices. This survey will also contain items, asking participants to identify any perceived links between the four dynamics of the C3 Inquiry Arc and the five dynamics of SEC. A single-group pretest- posttest design has been chosen for simplicity in construction to measure changes in IBI competency and SEC associated with the treatment, IBI training. This methodology also yields data and conclusions that are understandable to practitioners outside of research academia (Reichardt, 2019). Paired sample t-tests will determine whether there are any significant changes in participants' average SEC and social and emotional teaching practices after professional development in IBI.

Purpose Statement

The goal of this quantitative, single-group pretest-posttest design study is to inform the actions of educational leadership by determining if professional development and competency in C3 IBI influences participants' social and emotional competencies and teaching practices. SEL and IBI have been well defined by previous theoretical and qualitative research, and some

overlap exists in these constructs in motivation, collaboration, critical thinking, and problem solving (Batdi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012), yet an empirical relationship between specific models of IBI and SEL, such as C3 IBI and CASEL's SEC has not been assessed. Addressing this research gap will help educational leaders determine appropriate interventions to develop adaptive skills in their faculty, for the eventual benefit of K-12 students' SEC. More specifically, this study will add clarity to the suggestion that IBI might indeed be promoted as a much-needed instructional framework preparing teachers to infuse SEL into their normal disciplinary curriculum and instruction.

Research Questions

To test a hypothesis that C3 inquiry-based instruction (IBI) training and competency may be associated with increased participant social and emotional competency (SEC), and teaching practices I will address the following research questions:

1. Is there a difference in self-reported teacher inquiry-based instruction (IBI) competency after participation in the *Inquiry Design Model* (IDM) *Institute*?
2. Is there a difference in self-reported teacher social and emotional competency (SEC) and social and emotional instructional practices after participation in the *IDM Institute?*
3. What are the connections between *IDM Institute* participants' IBI and social and emotional competencies?
    a. To what degree is IBI competency related to *IDM Institute* participants' social and emotional teaching practices, self-awareness, self-management, social awareness, relationship skills, responsible decision-making, and overall teacher SEC scores?

b. What connections, if any, do *IDM Institute* participants construct between dimensions of the C3 Inquiry Arc and SECs

Assumptions, Limitations and Delimitations

Social research is bounded by assumptions and limitations, and the proposed study is no exception. The single-group design, sample population and instrumentation pose the greatest limitations to conclusions that can be drawn from the current study. Due to limited time, convenience, and the need for a population with a common understanding of IBI, the sample will not be randomly selected and will be limited to those participants who choose to participate in both pre-test and posttest surveys. Therefore, conclusions drawn from the data will not be generalizable beyond this group of participants. The nascence of the researcher –created survey will also present challenges to reliability and validity. I must also assume that participants understand and are not significantly influenced by the survey instrument used to measure IBI and SEL. Therefore, C3 IBI specific language will be tempered to limit instrument bias, and pilot testing must be completed. Lastly, since this study is quasi-experimental, it cannot support claims of causation between IBI and SEL (Creswell & Creswell, 2019; Reichardt, 2019).

Organization

The remainder of this dissertation is organized into 5 chapters, a bibliography and appendices in the following order: Chapter 2 will represent a review of the literature relevant to the intersection of SEL, IBI and adaptive leadership in education. Chapter 3 will describe study research design, methodology, instrumentation, sample selected and data collection. An analysis of the data will be described in Chapter 4, and Chapter 5 will summarize study conclusions, as well as implications for leadership and future research (Roberts & Hyatt, 2019).

Definition of Terms

Adaptive Leadership

A model of leadership that focuses on preparing followership to engage, identify resources, and adapt to solve the dynamic current and future challenges of a quickly changing environment that lack conventional solutions (Heifetz, 2021; Nicolaides & McCallum, 2013)

C3 Framework for Social Studies Standards (C3 IBI)

A national framework for inquiry-based instruction in social studies education advocating that instruction encompass student collaboration and the four dimensions of the Inquiry Arc: questioning; using disciplinary concepts and tools; student research and source analysis; and communication and informed action in order to prepare students for college, career and civic life (NCSS, 2013).

Collaborative for Academic Social and Emotional Learning (CASEL)

Established in 1994, CASEL is arguably the most prominent organization to research, advocate and guide the integration of SEL curriculum and instruction into K-12 education. Therefore, the current study defers to CASEL's model of SEL and SEC as an outcome variable (Durlak et al., 2015; Zhao, 2020).

Education for Democracy

A philosophy of education articulated by John Dewey over the course of two decades of scholarship, this theory will guide the current study. Valuing the wisdom gained by traditional education, yet the adaptive nature of progressive education, Dewey argued that the ideal system of education for a democratic society is purposed to create individuals with civic and social efficiency who are prepared to meet the demands of future learning through the integration of authentic experiences and reflection into their education. (Dewey, 1916 & 1924).

Inquiry Based Instruction (IBI)

A student-centered, discovery-based mode of instruction that compels students to investigate various sources in order to find, construct and communicate answers to questions of personal import (NCSS, 2013; Saunders-Stewart et al., 2015)

Social and Emotional Learning (SEL)

"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." (https://casel.org/what-is-sel/).

Social and Emotional Competency (SEC)

A measurement of an individual's SEL, in the categories of self-awareness, self-management, social awareness, relationship skills and problem-solving skills. These five dynamics are also often referred to as social and emotional competencies (Jennings et al., 2009)

CHAPTER 2: LITERATURE REVIEW

Introduction

"Thinking which is not connected with increase of efficiency in action, and with learning more about ourselves and the world in which we live, has something the matter with it just as thought." (Dewey, 1916, p. 110)

For millennia before John Dewey made this statement, and for over a century since, practitioners and scholars have debated the purpose of education. Should education prepare students with the technical knowledge and skills necessary for the workforce, or should it focus on human development, preparing the learner with self and social management skills to empower them for future endeavors? Can it accomplish both? From the quote above, we can conclude that John Dewey obviously valued both in his time of social and political change. Monumental changes in the way we live, work and socialize in the 21st century, coupled with new concerns for the deteriorating mental health and development of our youth (Odgers, 2020, NIMH, 2022), exacerbated by a global pandemic have once again necessitated adaptive leadership in education, according to Dewey's model of education for democracy, to prepare students with the capacity to adapt for the dynamic challenges of College, Career and Civic life (Bagwell, 2020; Siers et al., 2020; NCSS, 2013). Traditionally, policy and K-12 classroom teachers have focused on technical preparation, whereas human development has been relegated to supplemental programs, but K-12 teachers can also address social and emotional skills in their methodology for technical education, shouldering more responsibility for holistic youth development (Yoder, 2014b). Social and Emotional Learning (SEL) (Tienken, 2021) and Inquiry-Based Instruction (IBI) (O'Steen, 2008; Barrow, 2006) both have foundations in Dewey's work. SEL, a process to gain knowledge and skills has been promoted to develop the whole child, and IBI has developed

primarily to prepare students with technical disciplinary knowledge and skills. To inform teacher preparation and practice, this dissertation will assess empirical connections between IBI and SEL, as an analysis of Dewey's theory suggested. This literature review will unpack existing theoretical and empirical connections between the two constructs; building support for the proposed pretest-posttest study, purposed to determine if professional development and competency in C3 IBI is associated with participants' growth in social and emotional competencies and teaching practices. Through the conceptual framework illustrated in Figure 2.1, the following chapter will examine the development of and research supporting the constructs of SEL and IBI.

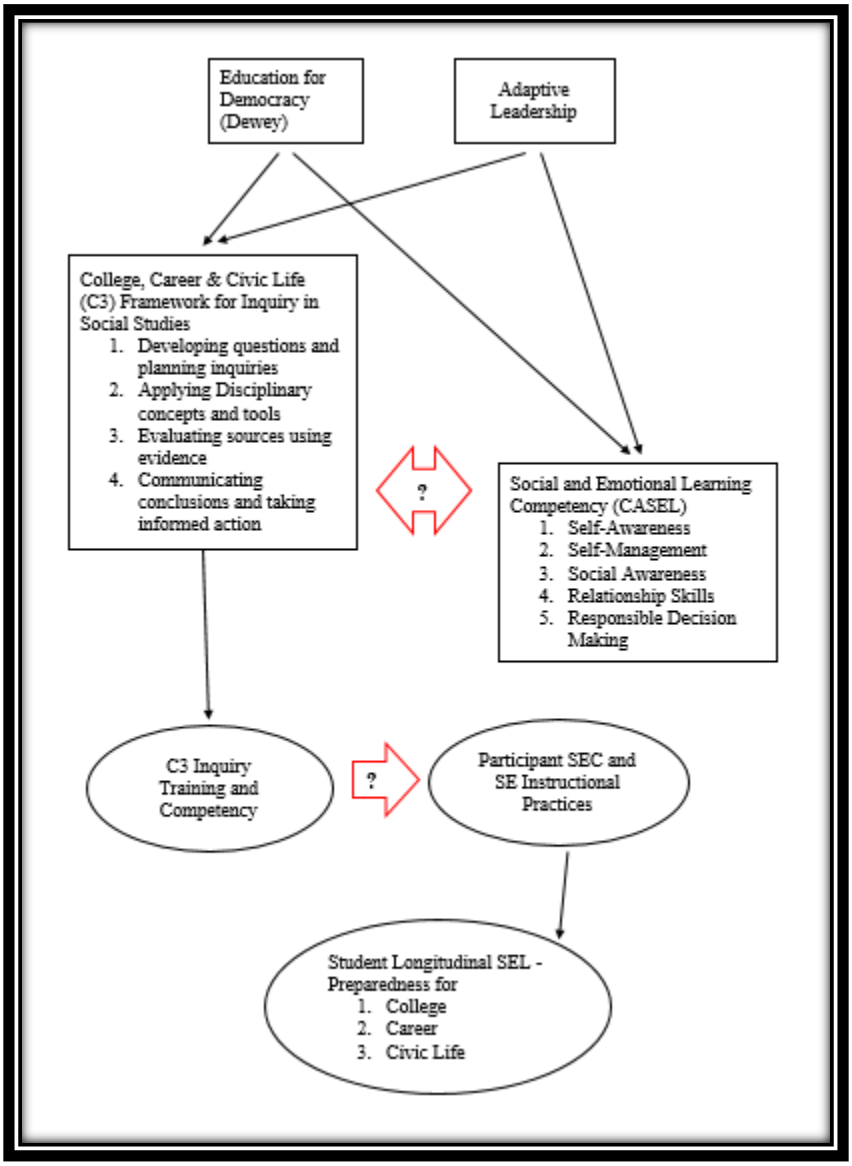
Theoretical Framework

More research is needed to inform educational leadership because policy makers have once again realized that education must be both, as John Dewey argued, progressive and moral, and that the process of education matters just as much as the outcome (1916, 1938). Creswell and Creswell (2018) argued that because a researchers' philosophical worldview influences their approach and practice of research, it should be made explicit in the proposal stages. A practitioner above all else, I approach research from a pragmatist worldview. Rather than purity of methodology, I will focus on the problem (Creswell & Creswell, 2018) of classroom teachers lacking opportunities for SEC development that align with their instructional practices. My intended consequence is to operationalize John Dewey's theory of education for democracy, and build capacity for Adaptive leadership in education, so that administrators might prepare their classroom teachers for the dynamic demands of unknown future challenges, empowering those teachers to do the same for their students (Northouse, 2019). Figure 2.1 has been included below

to better aid the reader in following the chain of logic employed within this dissertation, assessing connections between SEL and IBI.

Figure 2.1

Theoretical Framework: IBI as a Vehicle for SEL



The concept map above (Figure 2.1) begins with the foundational theories of education for democracy (Dewey, 1916, 1938), and adaptive leadership (Heifetz, 2009; Northouse, 2019) at the top, progressing downward to processes in the middle that might lead to the desired outcomes identified at the bottom. Theoretical constructs are noted in boxes, whereas outcome

variables appear in ellipses. Black arrows denote causal-correlational relationships identified by previous research, whereas red arrows denote areas to be addressed by this study. Identified at the top of the concept map are two theories,

Dewey's philosophy of education for democracy provides a conceptual framework for the current study, and we must unpack the theory in order to differentiate his proposed process from the objective. In regards to process, Dewey supported technical education integrated with a variety of experiences, compelling learners to investigate, collaborate, and solve authentic problems (Barrow, 2006; Dewey, 1916, 1938; O'Steen, 2008). In detailing this process, Dewey deferred to the scientific method, and laid the foundation for our modern frameworks of IBI (Barrow 2006; Rogers, 2007; Schwab, 1958), which can be defined as a student-centered, discovery-based mode of instruction that compels students to investigate various sources in order to find, construct and communicate answers to questions of personal import (NCSS, 2013; Saunders-Stewart et al., 2015). In regard to theoretical objectives, Dewey argued that his educational model would give students the capacity for future learning, with the social and civic efficiency to adapt for future challenges of society and democracy (1916, 1938). Contemporarily, we might equate this outcome to learner readiness for college, career and civic life, operationalized in the proposed methodologies as social and emotional competency (SEC). SEC can be defined as a measurement of "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.; Durlak et al., 2015, Hadar et al., 2020). In order to operationalize Dewey's theory of education for democracy, the current study will utilize contemporary

pedagogical models to assess connections between IBI as a process, and SEL, or more specifically, SEC as the objective.

As illustrated on the on the left-hand side of Figure 2.1, the current study will defer to the C3 Inquiry Arc as outlined in the College, Career and Civic life (C3) Framework for Social Studies Standards (NCSS, 2013). According to this pedagogical model, IBI is a dynamic process that takes place over the course of four dimensions of student action: developing questions, applying disciplinary concepts and tools, analyzing and evaluating sources, and communicating conclusions and taking action. IBI has developed primarily to prepare students with technical disciplinary knowledge and skills, but has also been associated with a variety of learner outcomes associated with SEL (Batdi et al., 2018; Beshears, 2012; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012)

John Dewey's outcome goals of student efficiency, adaptability and readiness for future learning will be operationalized in the following methodology by a model of SEL and SEC outlined by the Collaborative for Academic Social and Emotional Learning (CASEL). As shown in Figure 2.1, CASEL's model recognizes SEL as the process of developing SECs, including self-awareness, self-management, social awareness, relationship skills and responsible decision making skills. SEC provides metrics for SEL (Durlak et al., 2015). This is the most prominent model for SEL in K-12 education (Cooney, 2021, Zhao, 2020), and has been promoted as an educational process that should coincide with disciplinary content mastery processes in order to develop the whole child. (Yoder, 2014). To inform teacher preparation and practice, this dissertation will assess empirical connections between IBI and SEL, as an analysis of Dewey's theory suggested, illustrated in Figure 2.1 by the bidirectional red arrow. The current pretest-posttest study, illustrated by the unidirectional red arrow on the bottom of Figure 2.1, is proposed

to determine if professional development and competency in C3 IBI, is associated with participants' growth in social and emotional competencies and teaching practices.

Social and Emotional Learning

"Now in many cases—too many cases—the activity of the immature human being is simply played upon to secure habits which are useful. He is trained like an animal rather than educated like a human being." -John Dewey

A foreshadowing of SEL, Dewey sought education for the purposes of *social and civic efficiency*, denoting the capacity to "share in and give experiences" and judge others and decisions wisely in order to "make and obey laws" (Dewey, 2016, p. 87) respectively. In opposition to defining education as training, he posited that social organization resulted, in society, just as in classrooms, when all individuals had opportunities for individual contribution. Methodology also mattered to Dewey. For the goals of a healthy democratic citizenry, paraphrasing Abraham Lincoln, Dewey argued for a philosophy of education "by, and for experience" (Dewey, 1938, p.29) that prepared the learner with technical skills and *social efficiency*, building capacity for future learning. It would be over half a century before researchers began to codify Dewey's ideals about development of *social* and *civic efficiency*. For years, these constructs were simply referred to as the soft skills, or emotional intelligence that humans need to function in the workplace (Strozewski, 2022). The 1994 establishment of The Collaborative for Academic, Social, and Emotional Learning (CASEL) (Durlak et al., 2015) has provided a foundation of research and practice on which to base this literature review.

Development of SEL

It must be noted that CASEL's is not the only model of SEL, however it is the most prominent in U.S. K-12 education. Therefore, the CASEL model of SEL, comprised of five Social and Emotional Competencies (SECs) will frame this dissertation.

As noted on the middle right of Figure 2.1, CASEL's research collaborative formally defined SEL as:

> 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. (2020)

Although SEL is a broad construct, CASEL's research has provided a framework for knowledge and skills that can be promoted through evidence-based instructional practices and programs that target one or more of the five identified core competencies of self-awareness, self-management, social awareness, relationship skills and responsible decision making (Durlak et al., 2015). SEL generally refers to the process of acquiring these skills, whereas social and emotional competence (SEC) refers to the outcome (Jennings et al., 2009) or a measurement of the learning. In his assessment of teacher practices for SEC, Yoder (2014b, p.3) described the five SECs as:

1. Self-awareness is the capacity to recognize one's own emotions, interests, strengths and weaknesses. Self-aware teachers and students possess self-efficacy and self - esteem. They can identify and describe these characteristics in themselves, will be aware of what triggers their own emotions and how they might affect others.

2. Self-management is the capacity to handle daily stress, regulate emotions and set goals in challenging situations. Teachers and students with self-management skills might set plans to work toward goals, monitor their own progress, use feedback and seek help when needed.
3. Social awareness is an individuals' ability to account for other perspectives and show empathy. Socially aware teachers and students can identify social cues to predict the feelings and reactions of others. They understand group differences and diverse viewpoints and can identify family, school and community resources to meet their needs.
4. Relationship skills are the capacity to develop and maintain healthy relationships, to resist negative social pressures, solve interpersonal conflict, and seek needed assistance where appropriate. Teachers and students can make friends and communicate effectively to work collaboratively and meet group goals.
5. Responsible decision-making is an individual's ability to identify a problem, and consider multiple, often competing factors or perspectives to make and propose a solution. Teachers and students who have these skills can discuss strategies to resist peer pressure, they can self-evaluate and make decisions that positively affect not only themselves, but community.

In educational terms, SEL is the process of learning a specific framework of content and skills, whereas SECs are the measurable outcome (Durlak et al., 2015). Both have yet to be associated with a specific, cohesive pedagogical model for delivery.

Although SEL is a process that humans have always undergone, (Strozewski, 2022) educators have recently sought research to guide more intentional implementation. Cases of

successful SEL implementation generally involve two modes of delivery; explicit instruction and infusion (Education First, 2016). In interventions that prioritize explicit instruction, administrators, school counselors, teachers or program facilitators directly instruct SEL knowledge and skills to build SEC. For example, districts might adopt parts, or the entirety of an evidence-based, SEL curriculum, which would include purchased and scaffolded materials, texts and outcomes. These programs, such as *4R's*, *Second Step* and *Life Skills Training*, might be implemented by school employees as well as specially trained consultants or facilitators contracted at the school or district level. Since this type of SEL intervention has been more prominent in the research, it appears to be more prevalent (Belfield et al., 2015; Bowles, 2017; Durlak et al., 2015; Taylor et al., 2017). In contrast to explicit instruction, SEL infusion is not implemented as a stand-alone curriculum. In SEL infusion, teachers integrate SEL skills and lessons into existing disciplinary curriculum or instructional practices (Education First, 2016). SEL infusion may take the form of a social studies teachers' intentional adoption of student-centered discipline into their classroom management systems to strengthen students' self-awareness, self-management and responsible decision-making skills. That same teacher might also schedule regular opportunities for students to engage in discussion through lessons that involve problem-based cooperative learning to develop students' social awareness and relationship skills (Yoder, 2014b). Rather than choosing between these two modes of delivery, researchers have posited that for student success, education needs both SEL explicit instruction and infusion (Education First, 2016, Yoder, 2014b).

Research on SEL infusion into instructional practices is relatively nascent. However, scholars have called for more, as it offers the opportunity to empower more educational leaders and teachers to problem-solve and adapt to their own contextual challenges (Cooney, 2021;

Education First, 2016; Finch, 2016; Yoder, 2014b). In efforts to align educational scholarship with practice, educational leaders should seek spaces in current teaching frameworks and evaluation systems where SEL teaching practices might be more purposefully infused, as well as the educator development it necessitates.

Support for SEL in Research

There is broad acceptance that schools need to offer more than just academic instruction to prepare students for the demands of college, career, and civic life, working with diverse peers to solve problems. Accordingly, over the past two decades, SEL research has expanded rapidly, exploring SEL (Durlak et al., 2011; Durlak et al., 2015; Oberle et al., 2016) and associating SEL intervention programs and SEC with positive non-cognitive outcomes concerning individuals' health, well-being and measures of success.

In 2011, Durlak and his colleagues conducted a meta-analysis of 213 school-based programs for SEL development, representing (n=270, 034) K-12 students, and taking place from 1957-2007. The authors determined that intervention programs that were sequenced, prioritized participant action, focused on developing personal or social skills, and explicitly addressed one or more of the five SECs, or "SAFE", were markedly successful in comparison to controls. Students in these programs demonstrated enhanced SEL skills, attitudes, demonstrated fewer conduct problems and had lower levels of emotional distress (p. 413). In comparison to those in the control group, students in the intervention group demonstrated an 11% gain in academic achievement (p. 417). This meta-analysis is foundational to any contemporary intervention or research on SEL in K-12 schools as it underscored the benefits of SEL to students. Moreover, the authors' findings indicated that qualified interventions at the individual classroom level can be just as successful as those carried out at the school or district level, underscoring the importance

of individual teachers to SEL delivery. The authors also lamented a lack of consistency in developing and measuring skills, a query addressed by Jones et al., in 2015 (p. 419).

To determine the impact of factors other than socio-economic status on student non-cognitive outcomes, Damon Jones and his colleagues conducted a short-term and longitudinal analysis with (*n*=753) kindergartners of low socioeconomic status from three cities (Jones et al., 2015). When participants were assessed thirteen to nineteen years after the initial study, researchers found that students with higher teacher- reported measures of early social and emotional functioning generally reported higher long-term measures in education, employment and mental health. They also reported fewer instances of crime and substance abuse. Conclusions from research like that of Jones' study, associating SEC with positive health and success measures, has led to the development of interventions to build SEC in K-12 students. Scholars in the field have asserted SEL as a fundamental concern of K-12 education, similar to John Dewey's emphasis on *social efficiency*, and have developed comprehensive programs, not only for classroom interventions, but for school and district-wide initiatives as well (Oberle et al., 2016). Naturally, researchers have also recently begun to assess the effectiveness of these resource-intensive SEL intervention programs.

In a landmark meta-analysis assessing common outcomes of school-based SEL interventions, Rebecca Taylor and her colleagues (2017) expanded on the findings of the Durlak et al. (2011) and Jones' studies (2015). After aggregating 120 studies including 97,406 students in grades k-12, researchers concluded that SEL interventions were associated with students' long-term increased well-being, stronger social-emotional assets, improved relationships and decreased negative outcomes such as arrests and clinical psychological disorders. The Taylor et al. study also determined that SEL interventions were associated with measures of general

success, such as increased long-term academic performance, graduation rates and college attendance. In detailing benefits for students, the Taylor et al. study aggregated much of the quantitative data that undergirds the current emphasis on SEL. It also provided an impetus for more contemporary research detailing the challenges of designing curriculum for specific SEC outcomes.

Above and beyond individual benefits, researchers have also argued that SEL can translate to economic benefits for the public good (Belfield et al., 2015). If individuals, as posited by the Jones' study in 2015, have higher measures of academic achievement, well-being and success, coupled with lower instances of crime and substance abuse, it is reasonable to assert that SEL interventions designed to increase students' SEC might decrease the amount of school and community resources that are often siphoned by negative student behaviors and outcomes, such as the many administrator hours devoted to behavior referrals or counseling and intervention services. SEL skills might also improve students' economic stability and employment capability, building local communities. Belfield et al. conducted a meta-analysis comparing benefit-cost analyses of four prominent district-wide SEL intervention programs: 4R's; Second Step; Life Skills Training; and Responsive Classroom. Intensive analyses of these intervention programs, their direct and indirect costs, as well as associated changes in local metrics from delinquent behavior to standardized test achievement scores enabled authors to generate a net program value (NPV) for each intervention. Belfield and colleagues concluded that although all four interventions accounted for more economic gain than cost, with a positive NPV, Responsive Classroom accounted for the most significant cost effectiveness, with NPV = $1,222,000 per 100 students (p. 536). It should be noted that the Responsive Classroom program emphasized training local teachers to increase awareness and adoption of SEL into curriculum, to

maximize impact and longevity of outcomes. Findings from the Belfield et al. study provided support for a larger, societal benefit for K-12 emphasis on SEL.

Support for SEL in Policy

Vindicated by the research described above, for decades, educators have recognized an ethical motivation to address children's social and emotional health. (NEA, 1975; Nenonene et al., 2019). The National Education Association's *Code of Ethics for Educators* is full of phrases that denote value for SEL. It stated that the educator "strives to help each student realize his or her potential as a worthy and effective member of society…makes reasonable efforts to protect the student from conditions harmful to learning, or to health and safety,…and works to stimulate the spirit of inquiry…and understanding, …and the formulation of worthy goals" (NEA, 1975, 2020, Principle I). Although ethical codes arguably have little binding power for educative practice, they do shape how teachers frame their actions.

Federal and state education policies have also played a major role the adoption of SEL curriculum and instruction. Especially since the passing of the Elementary and Secondary Education Act of 1965, educational research has given policy makers impetus to legislate change in K-12 classrooms, but it has only been over the last decade that children's social and emotional health has become a concern for educational policy makers (Cooney, 2021). The *Every Child Succeeds Act* (ESSA), passed by the Obama administration in 2015 called for the improvement of non-academic measures in schools, such as conditions for learning, student peer interactions, volunteerism, community involvement, school climate, safety, and instructional practices aimed at developing relationship skills, to provide a well-rounded education (Grant et al., 2017). Today, accompanying tremendous growth in SEL literature, all 50 states have adopted pre-K SEL

competencies into their curriculum, and more than 20 have adopted SEL competencies for K-12 education (CASEL, n.d.). Although, SEL has been somewhat politically controversial of late.

SEL and *teaching the whole child* has evolved into a rallying cry for many educators, prioritizing the creation of efficacious and engaged citizens, the adaptive leaders for the future (ASCD, 2020; Yoder, 2014b). However, federal and state policy changes in support of SEL integration have led to recent controversy. As education reform often is, successes of local implementation of SEL have been tenuous and overinflated (Zhao, 2020). Further, since the political turmoil of the pandemic years, a general misunderstanding of SEL has led activist groups to associate it with student indoctrination and partisan rhetoric around other topics like critical race theory, or culturally responsive pedagogy (Kinkade & Hixenbaugh, 2021; Strozewski, 2022; Zhao, 2020), fueling the argument that SEL belongs at home, rather than in public schools. Some have gone so far as to argue that SEL "is often just a cover for progressive indoctrination of kids" (McCaughey, 2021, title), leading scholars and educators to approach with more caution. Fortunately, most legislation prohibiting the integration of SEL into schools and curriculum has remained in bill form, failing to become binding policy (SEL4US, n.d.). The question of "Who needs SEL?" remains under dispute. Researchers have generally emphasized student SEC development (ASCD, 2020; Durlak et al., 2011; Durlak et al., 2015; Taylor et al., 2017), but educator development will be the focus of the current study.

SEL for Teachers

The need for student SEL is obvious, but the avenues for delivery are not. More often than not, SEL is relocated to counselors, stand-alone curriculum or intervention programs (Durlak et al., 2015) but K-12 teachers might be better served and leveraged in this overall initiative. A burgeoning body of research has advocated for an investment in teachers' SEC -for

their own health and wellness, and indirect benefit to students (Conklin & Hughes, 2016; Jennings and Greenberg, 2009; Nenonene et al., 2019; Schonert-Reichl et al., 2017). Emphasis on individual teachers' SEC and social and emotional teaching practices may promote adaptive leadership, as it empowers educational leaders and teachers to operationalize SEL to meet the dynamic challenges of their classrooms, from shaping young citizens, to meeting the mandates of SEL adopted into state curriculum. Teacher preparation programs matriculate approximately 200,000 teachers every year (Schonert-Reichl et al., 2017). If we focus on social studies teachers alone, there are 1.5 million teachers (Zippia.com, 2021), who with some training in SEL, might simply adapt how they teach for the development of their students' SEL. If our goal is to promote SEL, the avenue for development cannot solely depend on expensive comprehensive district and school-wide programs taught by consultants from outside our communities. We must also address the preparation of our teachers, which has the double benefit of addressing their own health and wellness, while training them to account in their normal practice, for the social and emotional development of our students (Shonert-Reichl et al., 2017).

Education, already one of the most stressful professions in the human service industry (Schonert- Reichl et al., 2017) has become ever more demanding for teachers over the last two decades. One factor, the passage of the No Child Left Behind Act in 2001 codified the movement for product quality management into education, increasing demands on schools, teachers and students from more rigorous standardized testing and teacher performance measures. In 1976, 78% of teachers reported high levels of stress, whereas reports from just before the pandemic indicated that approximately 93% of teachers have reported feelings associated with stress and burnout. Top ranking reasons for teachers leaving the field included stress, poor emotion management and student behavior (Schonert –Reichl et al., 2017, p. 18). Jennings and

Greenberg (2009) cited a lack of teacher SEC in provoking a "burnout cascade" deteriorating relationships and school climate. Moreover, teachers have faced unique demands during the COVID-19 pandemic, from bearing students' traumas and safety concerns, to adjusting to the dynamic demands of remote learning, without much support or time for adaptation (Hadar et al., 2020). Only three percent of teachers polled in a 2020 survey felt their social and emotional needs were being addressed by administrators (Ferren, 2021, p.3). This perfect storm has compounded the stress and emotional labor involved in education, and has been blamed for the recent teacher shortage (Ferren, 2021; Steiner & Woo, 2021). Decades of research suggest that SEL might be needed to support our educators. When trained in behavioral and emotional dynamics impacting classroom management, they feel more efficacy in promoting a positive school climate (Schonert-Reichl, 2017). Data has also supported that teachers who develop SEC skills have better mental health and are more effective teachers (Nenonene et al., 2019).

Although empirical research is lacking to determine if developing teachers' SEC will directly translate to students, there is evidence supporting that quality teacher-led implementation of SEL leads to positive student outcomes (Jennings & Greenberg, 2009; Schonert –Reichl et al., 2017), but teachers cannot teach content and skillsets that they don't possess. Researchers have asserted the need for teacher preparation in SEL, positing that teachers with high SEC are better prepared to identify, reflect on and model appropriate social and emotional behaviors. This fosters healthier teacher-student relationships and classroom management. Moreover, these teachers are better equipped to purposefully integrate SEL programs as well as social and emotional teaching practices into their curriculum and instruction (Cooney, 2021; Finch, 2016; Jennings & Greenburg, 2009; Schonert – Reichl et al., 2017; Yoder, 2014). In 2009, Jennings & Greenberg addressed the state of the research to present and support The Prosocial Classroom

Model that outlines a relationship between teachers' SEC and student and classroom outcomes. After extensive review, the authors concluded there are logical and empirical connections between teacher SEC and student and classroom outcomes. Jennings and Greenberg (2009) noted specifically that across the literature, teachers' understanding and quality of instruction in SEL interventions had consistently greater effect than the dosage or number of SEL intervention sessions. The authors concluded therefore, that we need teachers with SEC who are also trained to embed SEL into their curriculum, and they called for future research to conduct randomized controlled trials to assess the efficacy of specific interventions.

In conclusion, for the benefit of our students and teachers, educational leadership must consider the development of teacher SEC. To better inform that process, research needs to further address methodology to deliver SEL to teachers, in addition to the traditional preparation and professional development that they often already receive for the delivery of disciplinary skills and content, such as social studies, math, language arts, or science. What if there were no need for a separate pedagogical model for the delivery of SEL? What if SEL was a latent benefit of an existing pedagogical model already in use for the delivery of disciplinary content?

Inquiry-based Instruction

"We only think when confronted with a problem." -John Dewey

Whereas some might argue that SEL is a newly defined concept in education, inquiry, a process of learning, or answering questions of personal import through investigations of experiences or data (NCSS, 2013; Saunders-Stewart et al., 2015), is definitely not. IBI is the use of this process and the motivator of human curiosity to stimulate learning. On the middle left of Figure 2.1 is the Inquiry Arc, according the College, Career and Civic life (C3) Framework for Social Studies Standards (NCSS, 2013). This framework will operationalize IBI in the current

study. The C3 Inquiry Arc is a 21st century version of IBI, crafted specifically for social studies education that highlights a path for teachers to interpret and propel social studies curriculum in a way that promotes students' civic competence, or what John Dewey might have called *civic efficiency* (1916). There is no doubt that the C3 traces its foundations to a millennia of educational theory.

Development of IBI

Inquiry as a motivator of authentic human learning and a framework for instruction can be traced back Hellenistic philosophers. Dewey discussed Aristotle's writing in depth in his own consideration of what modern education should be (1916). Dewey noted, "Systematic advance in invention and discovery began when men recognized that they could utilize doubt for the purposes of inquiry by forming conjectures to guide action in tentative explorations…" (Dewey, 1916, p. 107-108). He argued that all knowledge and beliefs should be investigated, and that a learner needed purpose and autonomy in the process of discovery; a purpose that originated from a question or problem. For these reasons, he advocated for the integration of real-world experiences, and gave deference to use of the scientific method (Dewey, 1938; Osteen, 2008). It is no surprise therefore, that the field of science education was the first to espouse inquiry-based instruction as its preferred instructional methodology, first in higher education, than in K-12, by the middle of the 20th century (Barrow, 2006; Schwab, 1958).

Beginning with Schwab's 1958 call to action in science education, *Teaching of Science as Inquiry,* IBI has evolved and slowly gained popularity among educators and scholars as a framework for learning throughout the second half of the 20th century. In 1998, The Boyer Commission on Educating Undergraduates codified IBI as the ideal method of preparation for undergraduates and urged change in higher education to accommodate. This report paved the

way for more research and development in its K-12 applications (Barrow, 2006; Boyer Commission on Educating Undergraduates in the Research University, 1998; Levy, 2013). Shortly thereafter, Barton and Levstik (2004) described and advocated for the use of IBI in the social studies, and it would soon gain traction in math and language arts education as well (Barrow, 2006; Pedaste, 2015; Levy, 2013).

The recent popularity and widespread use of IBI has created disagreement and confusion as to its definition and application (Pedaste, 2015). However, it has also yielded more comprehensive pedagogical frameworks, such as the Common Core State Standards' influence in language arts, the 5E Method in science, and the C3 Framework in social studies education (Colclasure et al., 2020, Lee & Swan, 2013; Pedaste, 2015). Formerly focused on disciplinary technical skills (Barrow, 2006; Barton and Levstik, 2004; Scwhab, 1958), only recently has the century- long evolution and disciplinary codification of IBI begun to revive the *social and civic efficiency*, the SEL-like outcomes for which John Dewey advocated. Levy et al. quoted J. Harste in the explanation that IBI "…provides an opportunity for learners to explore collaboratively topics of personal and social interest using the perspectives offered by others as well as by various knowledge domains." (2013, p. 389). This collaborative aim of IBI is essential if educators are to be adaptive leaders, preparing their students for the changing technical and social demands of 21st century life.

The College, Career and Civic Life (C3) Framework for Social Studies Standards was a "call to arms" for social studies educators in 2013. It laid a foundation for how to teach social studies in a way that accounted for disciplinary knowledge and skills, and authentically engaged students to prepare them for the dynamic demands of college, career and civic life, and will be a foundational construct for the current study. The C3 Framework described best practice social

studies IBI to take place through a continuum where student action proceeded through four specific dimensions of an inquiry arc: 1.) developing questions, 2.) applying disciplinary concepts and tools, 3.) evaluating sources using evidence, and 4.) communicating conclusions and taking informed action (Grant, 2013; NCSS, 2013). Progression through the Inquiry Arc might take place over the course of one lesson, or one unit of instruction. The reader should note a multidirectional red arrow in the upper middle of Figure 2.1, indicating a possible relationship between the constructs of the C3 Inquiry Arc and SEL that should emerge in this review of the literature. Every dimension of the C3 Inquiry Arc emphasized students' collaboration with diverse partners in order evaluate and express ideas, in order to solve problems (NCSS, 2013), and it should be noted that dimension four concludes with "taking informed action" on an issue of social or civic import (2013). I posit, that at various points, these processes require students to utilize the SECs of self-awareness, self-management, social awareness, relationship skills and problem-solving skills. Further, teachers need competency to guide this inquiry process. This theoretical relationship will be assessed by the current study, to determine if training and competency C3 IBI is associated with participants' growth in social and emotional competencies.

Support for IBI in Research

Research on student outcomes from C3 Inquiry application, specific to social studies education, is still nascent, which contributes to a need for the current study. It should also be noted that much of the research detailing positive outcomes of IBI is theoretical (Daque, 2020; Dewey, 1916; Dewey, 1938; Barton & Levstik, 2004; Levy, 2013; Schwab, 1958) rather than empirical. Therefore, we must focus on the body of empirical research assessing IBI outcomes in multiple contexts, to build justification for the design and scope of the current study.

IBI has shown to be just as effective as other instructional frameworks in delivering disciplinary knowledge and technical skills. Setting IBI apart, is an association with non-cognitive outcomes such as student motivation, autonomy and efficacy in application of that knowledge and skill (Batdi et al., 2018; Beshears, 2012; Spronken-Smith et al., 2012; Saunders-Stewart et al., 2015). IBI has been associated with increased student confidence, motivation and attitudes on content and instruction (Saunders-Stewart et al., 2015), while building student autonomy. According to Saunders-Stewart et al., research has painted IBI as a pedagogical model that applies learning strategies to personally meaningful questions, guided by the instructor, with collaboration from peers to gradually develop an "inquirer" who is able to rely on oneself to solve problems and learn (2015, p. 290). In other words, IBI, rooted in social constructivist theory and cooperative interaction is a vehicle for content that ideally shapes students as "inquirers" or independent learners. This conclusion frames a general outcome of IBI which is beneficial for disciplinary instruction, but also hints toward SECs such as self-awareness, self-management, and responsible decision making.

Studies assessing student and teacher self-report data regarding IBI outcomes have provided a foundation for the previous assertions. A 2012 study conducted across 15 university courses concluded that IBI was most highly ranked among students to meet course objectives (Spronken-Smith et al.). Bringing the conversation into social studies classrooms in 2012, Beshears conducted a case study comparing introduction and use of IBI with ten secondary level teachers. He concluded that this small group of teachers became less concerned about standard coverage and more concerned that students were engaged, thinking critically, making real-world, interdisciplinary connections, and problem solving across contexts. Teachers also reported that

students were building collaborative skills, and focused more on learning process rather than solely on product, reasoning and taking responsibility for their own learning.

Building on findings of the Beshears and Spronken-Smith studies from 2012, Saunders – Stewart et al. conducted a mixed-methods analysis to identify student outcomes associated with varied levels of IBI. Data were collected representing six teachers, and 14 classes (n=181 students) in grades 9-12 over four months in the Northwestern U.S. and Montreal to determine the most significant outcomes of varying levels of IBI. Researchers compared teachers' self-assessed level of IBI, through MANOVA analysis to corresponding student outcomes. Students associated with the highest IBI-rated teachers showed most significant variance in the learning competencies category of outcomes, meaning students in "most inquiry groups" were more likely than other groups to "feel that they achieved educational outcomes related to cognitive and affective learning competencies" (p. 304). Especially as the sample was somewhat low to produce trustworthy data results, more salient connections to SEL came from the teacher (n = 14) and student (n = 14) interviews the authors conducted, where students in "most inquiry groups appeared to be the most engaged, creative and personally invested in their work" (p.305). They did not necessarily perform better on cognitive outcomes, but felt more responsible for their own work, more confident about their critical thinking skills, and their ability to relate learning to real problem solving.

In 2018, a group of Turkish researchers (Batdi et al.) conducted another mixed-method study, attempting to use student report data to better understand conclusions of meta-analysis detailing student academic achievement outcomes associated with IBI. Data were aggregated from 27 studies for meta-analysis and 36 studies yielding qualitative students feedback on the impact of IBI in the classroom. From the meta-analysis, yielding an average effect size of (0.688)

on student achievement, which was a moderate effect. Researchers determined that IBI does have a positive effect on student academic achievement. The highest effect size was noted at the high school level, whereas the lowest effect was at the university level. The most relevant finding from the Batdi et al. study was the qualitative leg, assessing student perceptions of IBI, where researchers categorized five themes emerging from the data, namely affective, cognitive, social, learning environment and negative aspects. Concerning the affective theme, students felt that IBI made them more eager and motivated and empowered to participate in coursework and learn. With regard to the cognitive theme, students noted that IBI increased their research skills, their ability to learn disciplinary content, critical thinking and reasoning skills. Many students discussed the social effects, noting that IBI improved their skills for self-expression, motivated them to work with others, and in creating discussion, it increased opportunities for them to be more collaborative. Lastly, students' statements indicated that IBI created a more "meaningful and enjoyable" (Batdi et al., p.62, 2018) learning environment. From the last theme, negative aspects, the authors concluded that students generally supported IBI as a beneficial mode of instruction for technical skills and outcomes that prepared them personally for future learning.

Support for IBI in Policy

The policy adoption for IBI does not compare to the flurry of support for SEL in recent years, but its history is worthy of note. In 1937, The *Commission on Secondary Education* advocated Dewey's model of education, a precursor to contemporary models of IBI (Barrow, 2006), and the adoption of IBI as a framework for learning followed slowly throughout the twentieth century. This would be spearheaded primarily in science education (Schwab, 1958). The *1981 Project Synthesis Report* emphasized goals for a collaborative model of IBI for k-12 education, and the 1996 National Science Education Standards finally recognized inquiry skills

as the overarching goal in science education. As research and practice brought IBI into other disciplines, the 1998 Boyer Commission on Educating Undergraduates firmly established it as a methodology goal in higher education and urged change in colleges and universities to accommodate (Barrow, 2006; Boyer Commission on Educating Undergraduates in the Research University, 1998; Levy, 2013). This report paved the way for more research and development of IBI in K-12 applications in social studies, language arts and math (Levy, 2013).

From the inquiry-based concepts of authentic instruction (Newmann and Wehlage, 1993), Barton and Levstik (2004) described and advocated for the use of IBI in the social studies, leading to more codification in the field. To say the least, IBI has been impactful in social studies education in the past decade. In 2013, the *C3 Framework for Social Studies Standards* (NCSS), codified the nature and primary strands for social study, provided a national lens through which to view state social studies standards, and most importantly for this study, established a specific model of IBI as *the* pedagogical model for K-12 social studies education. Adopted by the National Council for Social Studies, the C3 would be strengthened by, and arguably has outlived the national movement toward The Common Core State Standards (Lee & Swan, 2013; Swan et al., 2020; New et al., 2021). The *C3* Framework has since been referenced or fully adopted in revisions to standards in at least 32 states. Further, as of spring 2020, the Council for the Accreditation of Educator Preparation (CAEP) has mandated teacher preparation program adherence to the *2017 National Standards for the Preparation of Social Studies Teachers*, which defers to the C3 Inquiry Arc and *Framework for Social Studies Standards* as a guide for why and how to teach social studies (CAEP, 2020). In summary, the C3 Framework not only codifies IBI in how social studies is taught, it also guides how social studies teachers are prepared.

IBI for Teachers

The wealth of research supporting IBI for students lead to the entrenchment of the C3 Framework in education policy. For the aim of the current study, to determine if C3 inquiry training and competency is associated with changes in participant SEC, as illustrated in the bottom row of constructs in Figure 2.1, we must now discuss the literature on teacher preparation in IBI, with possible connections to teacher SEC. Though research is somewhat scant and primarily qualitative, Teacher preparation programs have recently responded to the call to adopt IBI in multiple forms (Byker et al., 2017; Martell, 2019, Preus, 2011; O'Steen, 2008).

In 2011, Preus conducted a case study collecting data during the induction processes of ten newly hired teachers. Five teachers comprised a conventional, mentor and outcome-centered induction group to socialize the new teachers, and the other five, known as the Learning Team Facilitator group, studied and used a collaborative inquiry process for the professional development requirements of their first year. The author compared the process and outcomes of each group. Although both groups reportedly met outcomes and developed a network of peers for collaboration and support, Preus noted that in comparison, the IBI group emerged to be more student-centered and adaptive learners. They were better able to adopt lessons learned into their daily practice for student benefit. Moreover, they were able to describe their application of the inquiry process to many areas of their practice. The author concluded that "inquiry was a pathway to growth," (2011, p. 80) and therefore, the direct study of inquiry process should be primary to the training of new teachers. Although this study was small in scope and hardly generalizable, it lead to more study.

Byker et al. (2017) also explored IBI in teacher preparation, conducting a case study assessing (n=104) first year teacher preparation students' perceptions after experiencing IBI. An

analysis of student self-report data indicated that they had gained a better understanding of the inquiry process and tools, such as library and database searching skills, as well as writing, collaboration and presentation skills. IBI also helped students to appreciate the depth of issues and the commitment to knowledge finding that is the life of a teacher. The authors emphasized that collaboration was vital for students' success in IBI, which also facilitated the development of those skills with peers to support planning, writing and presenting/communication of findings from inquiry.

Another case study, conducted in 2019 (Martell) supported these conclusions, theoretically linking teacher training in IBI to processes and outcomes that might be associated with self-awareness, self-management, relationship skills and responsible decision-making. Although the Martell study focused more on the likelihood, or lack thereof, that young teachers would actually employ the IBI they had learned in their teacher preparation in their first full-time positions, all three of these studies asserted the need continued training and social support for IBI lesson design with colleagues, addressing what types of collaborations are required and when they should occur.

From IBI to SEL

In this review of SEL and IBI literature, I have described the evolution of SEL from the vague developmental outcomes, namely *civic* and *social efficiency*, as described by John Dewey (1916), to its codification and the milestone of its recent adoption into much of the nation's K-12 curriculum. We have also discussed the evolution of IBI, from the framework blueprinted in John Dewey's *Education for Democracy*, to its codification as an actionable pedagogical model for social studies content and skill delivery in the four dimensions of the Inquiry Arc, as described by the *C3 Framework for Social Studies Standards* (NCSS, 2013). Many questions

remain as to the problematic nature of how leadership might most effectively and efficiently deliver SEL to more K-12 students, as there is no one clear pedagogical model for its delivery (McCoy, 2018a; Voith et al., 2020). In Figure 2.1, the illustrated conceptual framework for this study, the reader should note this lack of a pedagogical model in the absence of black arrows, denoting a lack of empirical connection from the SEL box on the right to teacher and student SEC in the lower right. Rather than thinking of SEL solely as stand-alone, or supplemental curriculum, educational leaders might prepare regular classroom teachers to infuse social and emotional practices in their normal disciplinary instruction (Education First, 2016). Researchers have generally supported teacher development in order to facilitate student development (Jennings & Greenberg, 2009; Schonert-Reichl et al., 2017; Yoder, 2014a), but how?

The Problem with SEL Delivery

SEL has typically been delivered through district and school-wide interventions to implement practices and policies to help adults and students acquire and apply SEL knowledge and skills (McCoy 2018a, Voith et al., 2020). Intervention programs, such as *4R's, Life Skills Training, Second Step*, the *Peace Program,* and *Responsive Classroom*, among many others, targeting students at elementary, middle and secondary levels. Some target specific competencies and outcomes, and some are more effective than others (Belfield et. al., 2015; Durlak et al., 2016). These interventions have shown significant positive associations with improved students' academic performance, SEL skills, prosocial behavior, attitudes toward self and others, as well as reductions in conduct problems and student rates of anxiety and depression (Durlak et al., 2011) in the short term. Researchers have also confirmed that these positive impacts last over time for all racial and socio-economic status groups studied (Jones et al., 2015; Kendrioza et al., 2016; Taylor et al, 2017). Moreover, the effect sizes of these measures, ranging from 0.22 to

0.57, of evaluated SEL interventions were just as, or more significant, than those reported in meta-analysis of other well-established (non-SEL) psychosocial interventions (Durlak et al., 2016, p. 12).

SEL has traditionally been delivered as a school or district-wide initiative, by school counselors, or a team of specialists or consultants, as supplemental and/or stand-alone curriculum (Bowles et al., 2017; McCoy, 2018a; Voith et al., 2020). There are problems with this dependency on larger initiatives, delivered by a select group of specialists, which limit the feasibility and effectiveness of change. First, school-wide and district-wide interventions, often require districts to find, and collaborate with a team of specialists to train and deliver SEL curriculum, which can be a costly investment for already resource-strapped school districts. Although they are absolutely beneficial, and cost-effective in the long run (Belfield et. al., 2015; Durlak et al., 2016), district and school-wide interventions have required significant commitments of school administration and staff time for pre- assessment, training, scheduling, logistics around classroom SEL sessions and program maintenance (Voith et al., 2020). Secondly, research comparing the feasibility and outcomes of popular SEL school-wide intervention programs has noted that program impacts diminish with time, most notably, when the consulting teams leave the classroom (Voith et al., 2020). As it turns out, classroom teachers and their practices *really* matter in SEL.

Classroom Teacher Training and Delivery of SEL

Research suggests that SEL might be promoted more broadly, effectively and efficiently, if educational leaders seek professional development to increase individual K-12 classroom teachers' SEC, and social-emotional teaching practices, rather than stand-alone intervention programs for students (McCoy, 2018a; Voith et al., 2020; Yoder, 2014a). Student outcomes from

SEL interventions are positively associated with individual teachers over time, suggesting that teachers' competency and actions have a significant impact on their students (Jennings & Greenberg, 2009; Voith et. al., 2020). Unsurprisingly, cost benefit analysis has indicated that *Responsive Classroom*, an intervention program that prioritizes individual teachers' SEC and instructional practice development, rather than student outcomes, is the most economically efficient intervention (Belfield et al., 2015). Further, more research has recently surfaced warranting the development of teacher's SEC and individual teaching practices in order to impact student SEC (Cooney, 2021; Finch, 2016; Hadar et al., 2020; Nenonene et al., 2019; Schonert-Reichl et al., 2017).

In 2014, Nicholas Yoder and a team from the Center on Great Teachers and Leaders at American Institutes for Research conducted a study of research-based social-emotional programs. The purpose of this extensive literature review was to identify individual teacher practices held in common by prescriptive literature and the most successful SEL intervention programs. In their research to practice brief, *Teaching the whole child: Instructional practices that support social-emotional learning in three teacher evaluation frameworks*, Yoder and his team (2014a, p. 11) identified the following ten "best" teaching practices for SEL infusion:

1. Student centered discipline refers to developmentally appropriate classroom management strategies that give students some autonomy and shared responsibility for norms of classroom behavior.
2. Teacher language refers to teacher encouragement for students' work and for monitoring their own behavior.

3. Responsibility and choice are teachers' emphasis and classroom structures that give students meaningful choices and some level of autonomy within lessons and activities.
4. Warmth and support should be valued and demonstrated from teacher to student and from student to student relationships.
5. Cooperative learning refers to teachers' prioritization of students working with diverse peers toward substantive collective goals.
6. Classroom discussions involving substantive content and requiring students to elaborate on their thinking, as well as build on that of others, was also shared amongst successful SEL interventions.
7. Self-reflection and self-assessment should occur frequently, as teachers ask students to self-reflect and assess their own and others' work.
8. Balanced instruction refers to teachers' appropriate balance between individual and collaborative learning activities, giving students' regular and varied opportunities to directly learn, as well as actively engage with material.
9. Academic press and expectations refers to teachers' implementation of authentic and challenging work, and their communication of expectations that students can and will be successful.
10. Competence Building refers to teachers' emphasis on development of students' social and emotional competencies through communication of lesson goals and objectives, as well as encouraging and modeling prosocial behavior. This occurs through classroom instruction and activities, such as providing feedback, problem-solving and conflict- resolution strategies.

These ten practices were described in greater detail and advocated in the team's research to practice brief, where authors asserted that teacher preparation programs and evaluation systems should focus on developing teacher SEC and promoting social and emotional instructional practices. The Yoder report (2014a) fell short of creating a comprehensive pedagogical model for the delivery SEL, such as IBI or problem-based learning, but it was the first piece of literature to offer individual teachers insight into specific research-based practices for adoption in their classrooms and curriculum that might be associated with student outcomes in SEL. Further, it opened the door for research on how educators might teach for SEL by building their own SEC and adapting *how* they teach, not necessarily *what* they teach. The Yoder report also yielded the Self-Assessing Social and Emotional Instruction and Competencies (SASEIC) (Yoder, 2014b) instrument, known as the SASEIC, which will be employed to collect data on teachers' self-reported competencies in the current study.

Validating the SASEIC, recent studies have supported associations between classroom teacher SEC and social and emotional instructional practices (Cooney, 2021; Finch, 2016). Researchers have repeatedly argued that to reach the students, we must begin with teachers (Hadar et al., 2020; McCoy, 2018; Nenonene et al., 2019; Schonert-Reichl et al., 2017; Voith et al., 2020; Yoder, 2014a). Therefore, more research is needed to assess teacher professional development and pedagogical models that might encompass teacher SEC, the focus for the proposed study, eventually leading to social and emotional teaching practices.

IBI as an Instructional Framework

Research has demonstrated the positive outcomes of IBI, and directly compared these to outcomes of other instructional frameworks. IBI performs as well or better than other frameworks in regards to disciplinary content delivery, but is exceptional in building students'

efficacy and skills for collaboration, problem solving and adaptation (Batdi et al., 2018; Colcacure et al., 2020; Saye et al., 2013). Preparing teachers in IBI, may also have the same effect. On the lower left side of Figure 2.1, the reader should note a variable labeled as *Inquiry PD*. An understanding of the differing benefits of IBI as an instructional model helps explain why teacher preparation programs have increasingly sought to prioritize IBI in their curriculum and why teacher professional development is a target for the proposed study (Byker et al., 2017; O'Steen et al., 2008; Preus, 2011)

In a research-to-practice brief comparing pedagogical models for K-12 teachers, the Utah State Board of Education compared IBI to direct instruction (2020). The authors asserted that IBI was better for the development of student autonomy and equity. They also noted that explicit instruction facilitated students in retrieving information and integrating new material, whereas IBI promoted student choice, independent decision-making, higher-level thinking, and sense-making through the development of knowledge and skills based in a specific discipline (p. 2). Research in the field generally supports the assertions of the Utah BOE and the summative argument that IBI is not only a viable alternative to other instructional models for disciplinary content delivery, it facilitates the development of students' social and emotional competencies necessary for future successes in college, career and civic life (Byker et al., 2017; Colclasure, 2020; Grant, 2013; Osteen et al., 2008).

Described in their 2020 article, Colclasure et al. conducted a quantitative quasi-experimental study comparing the outcomes of IBI as compared to direct instruction. Agriscience Teacher participants volunteered to teach their classes using one of the instructional models exclusively, either the 5E Method of Inquiry Based Instruction (generally the model for K-12 science education) or Four Stage Direct Instruction for a period of eight weeks.

Curriculum was pre-determined for these 13 teachers, representing a total of 222 students. Content knowledge achievement was measured by a difference in students' pre and post-test scores. Contrary to the findings of previous research touting IBI as superior for content delivery, the authors found that the 5E method of IBI and the Four Stage Model of Direct Instruction were equally effective on students' knowledge attainment (Colclasure et al., 2020). The notable difference however, was that after struggling to adapt to IBI, students felt that they learned more from the IBI model. The authors asserted that there were likely benefits from IBI, other than disciplinary content delivery, such as social and learning processes or reasoning skills that warranted more study. Further, they posited a need for more research assessing the outcomes of other models of IBI, such as the *C3 Framework for Social Studies Standards* (NCSS, 2013).

IBI as SEL Delivery Framework

"Education is a social process; education is growth; education is not preparation for life but is life itself." –John Dewey

As noted earlier, John Dewey advocated for a system of education that gave students *social and civic efficiency* (1916, 1938), to prepare students for the changing demands of the future, which is also the definition of Adaptive leadership (Northouse, 2019). Dewey argued that in order to do this authentically, educators needed integrate experiences with technical education in order to solve authentic problems (Dewey, 1938). The social and civic efficiency Dewey discussed as goals, might also be described as SEC. Dewey deferred to the scientific method as a framework to guide students through a process of questioning, technical learning, experience or experimentation and finally communication and reflection, which parallels the four dimensions of the C3 Inquiry Arc (NCSS, 2013). A deeper analysis of the C3 Inquiry Arc reveals connections to SECs. The C3 described that quality social studies teaching happens in four

dimensions: 1.) developing questions, 2.) applying disciplinary concepts and tools, 3.) evaluating sources using evidence, and 4.) communicating conclusions and taking informed action (NCSS, 2013). Collaboration with diverse partners to solve problems is emphasized in all four dimensions. Since the questions involved in dimension one could be of personal, or social import, this dimension might involve self-awareness, and the analysis phase of responsible decision-making. Although more disciplinary to social studies in nature, dimension two involves the self-management required in learning new skills, often through collaboration with others. Dimension three, evaluating sources and using evidence, requires the autonomy of self-management and social awareness to detect and account for bias. Lastly, dimension four focuses on responsible decision making as the inquirer considers various perspectives or solutions to build and deliver an argument for informed action, as well as the relationship skills involved in communication, discourse and collaborative action.

The current study will assess the outcomes of a specific professional development training in IBI, specifically the IDM Institute. According to John Lee (11/17/21), this workshop for C3-style, social studies IBI is hosted every summer, by the authors of the *C3 Framework for Social Studies Standards*, Kathy Swan, John Lee, & S.G. Grant, and endorsed by the National Council for the Social Studies. These workshops have included between 150 and 230 in-service social studies teachers, curriculum specialists and higher education faculty who wish to deepen their understanding of IBI and learn how to build structures from this framework into their own classrooms for the benefit of their own students' development.

With the theoretical parallels between IBI and SEL addressed, we turn to empirical connections. Decades of research have supported the claim that IBI is just as, or more beneficial for student's disciplinary content acquisition and learning process skills than other instructional

models (Batdi et al., 2018; Colclasure et al., 2020; Dague, 2020; O'Steen, 2008; Spronken-Smith et al., 2012; UtahSBE, 2020). Models that offered more structure, have generally been more effective for content delivery and use of disciplinary tools than other instructional frameworks (Colclasure et al., 2020; Levy et al., 2013), and discovery-based models that leverage student questioning have tended to be more affective in developing the learning process and competencies that might be associated with SEL (Spronken-Smith et al., 2012). Most pertinent to the proposed study, is the recent body of research that has addressed non-academic outcomes of Inquiry. The conclusions of these studies are noted in the left hand columns of Tables 2.1 and 2.2. Mostly qualitative in their connections from IBI to SEL, the proposed study attempts to build on this body of work.

To undergird Dewey's interplay of these constructs, Chapter II began with a discussion of the development of SEL and its benefits, followed by a thorough examination of IBI and its application in social studies education. To demonstrate the translation of IBI outcomes into SEC, Table 2.1 illustrates the overlap between student outcomes of IBI, as demonstrated in empirical research, and skills related to the five SECs. IBI gives students real opportunities to learn and practice the social and emotional skills of SEC, listed in the second column.

Table 2.1

Crosswalk I: Student IBI Outcomes and SEL Competencies

Outcomes of IBI	**Social and Emotional Skills Related to Each Competency** (Yoder, 2014a)
Confidence	**Self-Awareness:** Possess self-efficacy and self-esteem
(Batdi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012)	**Self-Management:** Exhibit positive motivation, hope, and optimism
	Relationship skills: Demonstrate leadership skills when necessary, being assertive and Persuasive
	Responsible Decision Making: Become self-reflective and self-evaluative, make decisions based on moral, personal, and ethical standards
Autonomy/Motivation in learning	**Self-Awareness:** Identify own needs and values, accurately recognize own strengths and limitations
(*Andolina & Conklin, 2018, 2020; Batdi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012)	**Self-Management:** Set plans and work toward goals, overcome obstacles and create strategies for more long-term goals, monitor progress toward personal and academic short- and long-term goals, attention control (maintain optimal work performance), exhibit positive motivation, hope, and optimism, seek help when needed, display grit, determination, or perseverance
	Relationship skills: Evaluate own skills to communicate with others, Resist inappropriate social pressures
	Responsible Decision Making: Make decisions based on moral, personal, and ethical standards
Problem-Solving	**Self-Awareness:** Accurately recognize own strengths and limitations, Identify own needs and values
(Badi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012)	**Self-Management:** Overcome obstacles and create strategies for more long-term goals
	Social Awareness: Identify and use resources of family, school, and community
	Relationship Skills: Prevent interpersonal conflict, but manage and resolve it when it does occur
	Responsible Decision Making: Identify problems when making decisions, and generate alternatives, implement problem-solving skills when making decisions, when appropriate
Critical Thinking	**Self-Awareness:** Accurately recognize own strengths and limitations

(Batdi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012)	**Self-Management:** Use feedback constructively
	Social Awareness: Evaluate others' emotional reactions, understand other points of view and perspectives, appreciate diversity (recognize individual and group similarities and differences)
	Relationship Skills: Evaluate own skills to communicate with others, manage and express emotions in relationships, respecting diverse viewpoints
	Responsible Decision Making: Reflect on how current choices affect future, become self-reflective and self-evaluative
Collaboration, Speaking and Listening	**Self-Awareness:** Analyze emotions and how they affect others
(*Andolina & Conklin, 2018; Batdi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012)	**Self-Management:** Manage personal and interpersonal stress
	Social Awareness: Identify social cues (verbal, physical) to determine how others feel, predict others' feelings and reactions, evaluate others' emotional reactions, respect others (e.g., listen carefully and accurately)
	Relationship skills: Exhibit cooperative learning and working toward group goals, communicate effectively, demonstrate leadership skills when necessary, being assertive and Persuasive
	Responsible Decision Making: Make responsible decisions that affect the individual, school, and community, negotiate fairly

*Although the treatment in these studies meets criteria to be considered IBI, authors do not directly reference IBI in their text

In 2012, Spronken-Smith and her colleagues conducted a follow-up analysis of quantified case study data to assess students' perceptions of the outcomes of IBI, and compare them between each of three levels of inquiry: structured, guided, and open inquiry. Data represented 15 different case studies over a wide range of disciplines and universities in New Zealand, with a total of 904 students. Notable, effect sizes were not published, however, the researchers' findings reinforced the notion that IBI was generally "more effective than traditional, lecture-based teaching for achieving a variety of student learning outcomes," (p. 58) namely problem-solving

skills, an understanding of content relevance, challenge, and to a lesser degree, questioning previous assumptions. Together, these outcomes may also point to student autonomy, or Dewey's *civic* and *social efficiency*.

As the research evolved, K.S. Saunders –Stewart and their colleagues (2015) identified outcomes of IBI that take us one step closer to the five competencies listed in the CASEL SEL model. In their qualitative analysis of students' perceptions of IBI outcomes, Saunders-Stewart et al. (2015) found that students with higher levels of IBI in their classrooms reported higher levels of confidence with the subject matter, motivation, problem solving skills and critical-thinking skills. Although the sample population was relatively small, (n=181) their conclusions noted that IBI promoted participants' development into autonomous learners, preparing the learner for future learning.

Andolina and Conklin never directly referenced IBI, but curiously, they cited SEL in the title of their 2020 study, "Fostering Democratic and Social-Emotional Learning in Action Civics Programming: Factors That Shape Students' Learning from "Project Soapbox." Two studies from these authors (2018 & 2020) assess self-reported student outcomes from action civics projects, a curriculum that compels students to identify and research local issues, pose questions, assess policy alternatives and build speeches to advocate for local civic action. This progression mirrors the four dimensions of the C3 Inquiry Arc, and mixed-method analysis indicated increased students' speaking and listening skills, feelings of connectedness, and empathy for others, clearly related to the SEC, relationship skills.

Perhaps the most compelling empirical link between IBI and SEL is the meta-analysis conducted by Batdi et al. in 2018, assessing outcomes of IBI. This study addressed 27 studies for meta-analysis of academic outcomes and coded 36 for a qualitative analysis of participant

perceptions. The qualitative leg yielded 3 domain categories for participant responses: affective, cognitive and social, with the latter two illustrating notable connections to SEC. Within the cognitive domain, among other outcomes, students reported that IBI increased capacity for perception, which we might parallel with self and social-awareness. Within the social domain, students noted that IBI developed their ability to express ideas, (self-management & relationship skills), and created a setting for shared discussion where they were more motivated in group work and felt more socially active. Because of findings like these, adding to the body of research to support IBI models as generally superior to promote students' collaboration (Byker et al., 2017) and socio-emotional development, in addition to academic development, more recent study has addressed the application of IBI to teacher preparation courses (Byker et al., 2017; Martell, 2019, O'Steen, 2008).

Existing data support a hypothesis consistent with an analysis of Dewey's theory of education for democracy, that IBI may be a latent delivery system for SEC. However, the discerning reader may note that Table 2.1 references student outcomes from IBI and student goals in SEC, as opposed to teacher SEC. Since assessing professional development for the delivery of teacher SEC is a primary goal of this study, Table 2.2 has been constructed to illustrate research findings for teacher outcomes from IBI professional development and their connections to SEC-related skills. Although the empirical research around non-academic outcomes from teacher IBI development is scarce, Table 2.2 should build adequate support for the proposed pretest-posttest study, purposed to determine if professional development and competency in C3 IBI is associated with participants' growth in social and emotional competencies.

Table 2.2

Crosswalk II: Teacher Development in IBI and SEC

Outcomes of Teacher Development in IBI	**Social and Emotional Skills Related to Each Competency** (Yoder, 2014a)
Adopted a more student-centered approach	**Self-Awareness:** Label and recognize own and others' emotions
(Beshears, 2012; Preus, 2011)	**Social Awareness:** Understand other points of view and perspectives; appreciate diversity (recognize individual and group similarities and differences)
	Relationship skills: Exhibit cooperative learning and working toward group goals, Provide help to those who need it
	Responsible Decision Making: Become self-reflective and self-evaluative; make decisions based on moral, personal, and ethical standards; make responsible decisions that affect the individual, school, and community
Application of Inquiry Process to Real-World Problems	**Self-Awareness:** Identify own needs and values; accurately recognize own strengths and limitations
(Beshears, 2012, Byker, 2017; Preus, 2011)	**Self-Management:** Set plans and work toward goals; overcome obstacles and create strategies for more long-term goals; monitor progress toward personal and academic short- and long-term goals; exhibit positive motivation, hope, and optimism; seek help when needed, display grit, determination, or perseverance
	Responsible Decision Making: Identify problems when making decisions, and generate alternatives; implement problem-solving skills when making decisions when appropriate
Communication & Collaboration	**Self-Awareness:** Analyze emotions and how they affect others
(Preus, 2011, Beshears, 2012; Byker, 2017)	**Self-Management:** Manage personal and interpersonal stress
	Social Awareness: Identify social cues (verbal, physical) to determine how others feel; predict others' feelings and reactions; evaluate others' emotional reactions; respect others (e.g., listen carefully and accurately)
	Relationship skills: Exhibit cooperative learning and working toward group goals; communicate effectively; demonstrate leadership skills when necessary, being assertive and persuasive
	Responsible Decision Making: Make responsible decisions that affect the individual, school, and community; negotiate fairly

Critical Thinking and Problem-Solving Skills	**Self-Awareness:** Accurately recognize own strengths and limitations; identify own needs and values
(Beshears, 2012; Byker, 2017; Preus, 2011)	**Self-Management:** Overcome obstacles and create strategies for more long-term goals
	Social Awareness: Identify and use resources of family, school, and community
	Relationship Skills: Prevent interpersonal conflict, but manage and resolve it when it does occur
	Responsible Decision Making: Identify problems when making decisions, and generate alternatives; implement problem-solving skills when making decisions when appropriate

Gaps in the Literature

To share the responsibility of SEL integration, regular classroom teachers need professional development experiences and pedagogical frameworks that will facilitate their own SEC growth for stress management (Ferren, 2021; Steiner & Woo, 2021), as well as for purposeful infusion of SEL into curriculum and teaching practices for student development (Nenonene et al., 2019; Schonert-Reichl et al., 2017; Yoder, 2014a). Further research is needed to better inform educational leaders on which types of professional development experiences will facilitate teachers in meeting these needs. Teacher preparation programs have begun to address this problem (Byker et al., 2017; Hadar et al., 2020; Nenonene et al., 2019), but there is still no consistent framework that meets the needs for classroom teachers' dual concerns of disciplinary content delivery and teacher SEC development and implementation. Further, the research linking teacher development in IBI to SEC is nascent and largely qualitative in nature. The proposed study addresses an identified gap in the literature, utilizing quantitative study, assessing training and competency in a specific model of IBI, the C3 Inquiry Arc, and its associations with CASEL's specific model of SEL in the form of SEC. There is a lack of literature to assess the

outcomes of teachers' training and experience with IBI, as well as any outcomes in IBI professional development that may be associated with SEL.

Summary

This review has considered bodies of literature on SEL and IBI, as well as the necessity and crossover between the two, operationalizing John Dewey's education for democracy (1916, 1938), with a goal for adaptive leadership (Northouse, 2019) in education. Past research has clearly demonstrated that IBI is beneficial for disciplinary content delivery, and is associated with many skill and dispositional outcomes (Andolina & Conklin, 2018, 2020; Batdi et al., 2018; Saunders-Stewart et al, 2015; Spronken-Smith et al., 2012) that can be associated with CASEL's five SECs. Researchers have also argued that in contrast to a dependence on stand-alone programming, SEL can be more effectively promoted by developing classroom teachers' SEC, for their own health, as well as to empower them to positively interact with students, and purposefully integrate social and emotional management and teaching practices into their classrooms (McCoy, 2018; Schonert-Reichl et al., 2017; Voith et al., 2018; Yoder, 2014a). Therefore, professional development opportunities must be assessed for their impacts on teacher SEC. Early research on teacher professional development in IBI suggests outcomes in teacher SEC that might bridge this gap (Beshears, 2012; Byker et al., 2017; Preus, 2011) but more research is needed. The proposed study will operationalize an existing model of IBI, the C3 Inquiry Arc, to assess its relationship to the CASEL model of SEL. More specifically, the current study will extend the body of research to educators, by determining if *IDM Institute* participants' training and competency in IBI can predict changes in teacher SEC and social and emotional teaching practices.

Methodology

We know that there is a significant body of quantitative and qualitative literature supporting the constructs of SEL as a curriculum and IBI as an instructional framework. The literature linking teacher development in IBI to SEL, however is scarce. A substantial amount of theoretical and qualitative research supports my hypothesis that IBI can have latent benefits associated with CASEL's 5 competencies of SEL. We also know that quantitative and qualitative research assesses students' growth in SEC with district and school wide interventions, as well as a list of "best" instructional practices associated with these interventions that may be adopted into individual classrooms. Moreover, there is a dearth of research that links a specific model of IBI to a specific model of SEL, quantified as SEC. Researchers lack assessment around a comprehensive instructional framework to deliver SEL in regular classrooms, and more research is needed to understand the development and impact of teachers' SEC. To test John Dewey's theory of education for democracy and inform teacher preparation and practice, the proposed single group, pretest -posttest design study aims to determine if C3 IBI training and participants' self –reported IBI competency is associated with increased participant SEC and social and emotional teaching practices.

CHAPTER 3: METHODOLOGY

Introduction

"A society which is mobile, which is full of channels for the distribution of a change occurring anywhere, must see to it that its members are educated to personal initiative and adaptability." (Dewey, 1916, p. 64)

In an age of industrial and progressive revolution, John Dewey began outlining a philosophy of education purposed to shape self-aware and adaptable student-citizens who possessed the social and civic efficacy to stabilize the economy and maintain representative democracy. Now, more than a century later, his goals and philosophy are no less relevant. Social and emotional learning (SEL), a modern interpretation of Dewey's humanist goals has become ever more important in our quickly changing, polarized and technology driven world. SEL standards have been adopted into curriculum for pre-K education in all fifty states, and K-12 in more than twenty (CASEL, n.d.). Therefore, educational leaders must find avenues to support schools and teachers in upholding these new state mandates for SEL. Research has shown that SEL can be taught indirectly, and purposefully infused into classroom pedagogy; by adapting how we teach, rather than what we teach (CASEL, 2017; Cooney, 2021; Education First, 2016; Finch, 2016; Voith et al., 2020; Yoder, 2014b). However, there are no state mandated accountability measures, no ownership for who is responsible for SEL instruction, and many educators do not have clear operational definitions for SEL, let alone, a consistent framework for how it can be infused into their classrooms (McCoy, 2018a). In order to develop students' social and emotional competencies (SEC), researchers have also posited a necessity for the development of teachers' SEC and social and emotional teaching practices (Cooney, 2021; CASEL, 2017; Finch, 2016; Jennings, 2009; Schonert – Reichl, 2017; Yoder, 2014b). But how?

Inquiry-based instruction (IBI) may offer one such solution to help classroom teachers infuse SEL into their regular practice.

Decades of research have framed a theoretical relationship between IBI, an instructional framework, and outcomes associated with SEL (Barrow, 2006; Batdi et al., 2018; Beshears, 2012; Saunders-Stewart et. al., 2015; Spronken-Smith et. al., 2012). It is possible therefore, that teacher training in specific pedagogical models and best practices of IBI might be associated with increased teacher social and emotional competencies and increased inclusion of SEL teaching practices in their classrooms. More research is needed to better understand this relationship. Accordingly, the proposed quasi-experimental study will assess participants' training and competency in inquiry-based instruction and its empirical relationship to social and emotional competencies and teaching practices. To ensure a better understanding of the constructs and interaction under study, this chapter will address research design and questions, participants and their context, procedure, treatment, variables and instrumentation, validity, data analysis, ethical considerations, limitations and delimitations.

Research Design

Researchers have already linked IBI to outcomes associated with SEL theoretically (Dague, 2020; Dewey, 1938, 1916; O'Steen, 2008), as well as through mixed-methods (Saunders-Stewart et al., 2015) and qualitative study designs (Batdi et al., 2018; Beshears, 2012; Spronken-Smith et al., 2012), however, they have not yet directly linked the C3 model of IBI and CASEL's model of SEL or SEC. This exploratory body of research makes quantitative study appropriate, as long as it is conducted with caution for threats to validity. To be consistent with quantitative research norms (Creswell & Creswell, 2018; Kravitz, 1987), the current study will assess a narrowed hypothetical relationship between specific models of IBI and SEL, in regard to

participants in the *IDM Institute*. Conclusions of this study will largely depend on correlational data analysis, which will limit any claims of causality (Creswell & Creswell, 2018; Kravitz, 1987).

The proposed single group, pretest -posttest design study aims to assess the empirical relationship between participants' training and competency in C3 IBI, and their self-reported SEC and social and emotional teaching practices. Reichardt classified a single pretest –posttest design as a quasi-experimental where a "treatment measure is observed, the treatment is introduced, and a posttest measure is observed." (2019, pg. 99). Accordingly, the current study will compare participants' self-reported IBI competency, SEC and social and emotional teaching practices before and after completion of the *IDM Institute* professional development workshop. A single-group pretest- posttest design has been chosen for the simplicity in its construction to measure changes in participants' IBI competency and SEC associated with the treatment, IBI training. It will also provide a data collection opportunity to assess predictive and perceived relationships between IBI and SEC. Further, this research design yields data and conclusions that are understandable to average practitioners outside of research academia (Reichardt, 2019).

Research Questions

To test a hypothesis that C3 inquiry-based instruction (IBI) training and competency may be associated with increased participant social and emotional competencies (SEC) and teaching practices, I will address the following research questions:

1. Is there a difference in self-reported teacher inquiry-based instruction (IBI) competency after participation in the *Inquiry Design Model (IDM) Institute*?

2. Is there a difference in self-reported teacher social and emotional competency (SEC) and social and emotional teaching practices after participation in the IDM Institute?
3. What are the connections between *IDM Institute* participants' IBI and social and emotional competencies?
    a. To what degree is IBI competency related to *IDM Institute* participants' social and emotional teaching practices, self-awareness, self-management, social awareness, relationship skills, responsible decision-making, and overall teacher SEC scores?
    b. What connections, if any, do *IDM Institute* participants construct between dimensions of the C3 Inquiry Arc and SECs?

Population and Sample

The current study will address a convenience sampling of participants from the Summer 2022 *IDM Institute* who volunteer to complete both iterations of the researcher-created Inquiry and Social and Emotional Competency survey (ISEC). The *IDM Institute* is a two-day professional development workshop for C3 IBI. Since its beginning in 2014, this annual institute has hosted from 150 to 230 participants in a variety of locations (J. Lee, personal communication, November, 17, 2021), and so I anticipate approximately 200 workshop participants. Participants will likely be somewhat exceptional in their interest in IBI, relative to the general population of social studies teachers, because they have chosen to seek, pay for, and complete nationally renowned professional development in the subject. This unique population makes finding a comparable control group with a large enough sample for analysis with both

groups exceptionally challenging, again justifying the use of a single-group design. All participants will be invited to take part in the study, however, some may not opt to participate.

A power analysis using G*Power software (Creswell & Creswell, 2018, Cooney, 2021; Finch, 2007) was conducted to determine the minimal sample size needed to enable the proposed tests and analysis methodology to detect at least a small effect, $f^2 = 0.1$ (Cohen, 1988). To achieve 95% power with significance of $p < 0.05$, the G*Power calculator indicated a target sample of at least $n = 110$. Achieving this target sample should be feasible, as long as attendance at the 2022 *IDM Institute* is consistent with past enrollments.

Treatment Context and Setting

The current study will be conducted around the Summer *IDM Institute*, to be held on July 11th and 12th of summer 2022. This treatment is necessary to give participants a common experience and vocabulary concerning IBI, the independent variable, which is indispensable for reliable self –report data. The *IDM Institute*, the treatment in this study, began as a two-day event in New York, in 2014, facilitated by three authors of the C3 Framework for Social Studies Standards, John Lee, Kathy Swan and S.G. Grant. The Inquiry Design Model (IDM) guides inquiry-based curriculum planning and instruction in social studies education (Grant, 2013; Swan et al., 2020), and since 2014, the *IDM Institute* has been held in various cities, to train social studies teachers in building C3-style inquiry-based instruction into their curriculum and instruction. Due to travel and distancing constraints mandated by the pandemic, the event was held remotely in 2021 and will be again in the summer of 2022.

During day two of the summer 2022 *IDM Institute*, participants will be introduced to language of SEL, specifically, SEL, the five SECs and ten social and emotional teaching practices. This approximately 45-minute session will enable participants to identify these

phenomena, should they occur in the inquiry process. Participants' familiarity with this terminology is essential to reliable data collection in part III of the posttest survey instrument, purposed to answer RQ3. This will likely introduce the threat of history bias into conclusions. However, the guiding literature on sound survey design and administration (Rea & Parker, 1997), has insisted that study participants need an understanding of the technical jargon included in the instrumentation. In the proposed study, the treatment is specifically designed to build participants' understanding and competency in IBI, and the language of SEL must be introduced for valid assessment.

Institute participants will receive an email invitation to participate in the first iterance of the ISEC survey just before the institute, and will likely complete all work from the comfort of their own homes. Research has indicated that more than just an affinity for IBI, teachers need tools, time and opportunities to develop inquiry practices in the classroom (Martell, 2019). With this in mind, for more meaningful results, the second iteration of the ISEC will be administered two weeks after the *IDM Institute*, giving participants opportunities to utilize tools from their training during preparations for the coming school year.

Procedures

Because this study involves research with human subjects, I will begin by seeking IRB approval. After approval, and in the week before commencement of the July 11th and 12th, 2022 *IDM Institute*, email invitations for the ISEC *Qualtrics* survey will be distributed to all those registered for participation. Individual email invitation links will be generated for each participant by *Qualtrics*, matching and identifying each participant with a survey code. After each email address has been matched with a participant code, and post-treatment survey invitation links have been distributed, two weeks following the *IDM Institute*, all identifying data

will be destroyed. Survey data will be collected via *Qualtrics*, downloaded into *Microsoft Excel* for initial screening, and exported to *IBM SPSS* for further analysis. Participants' self-reported data will then be analyzed for comparison of pre and post-institute responses in regard to each research question.

Variables

The proposed study will measure eight self-reported dependent variables, IBI competency, teacher SECs (self-awareness, self-management, social awareness, relationship skills, and responsible decision-making) and aggregated social and emotional teaching practices before and after the treatment, participation in the 2022 *IDM Institute*. All variables will be measured independently by a single questionnaire, the ISEC that contains two previously and independently validated instruments. IBI competency will be computed as the mean score of self-report Likert scale measures from an adapted version of the QTS Protocol (Swan et al., 2020) and will be used to assess whether or not the treatment, the *IDM Institute*, is associated with a change in participants' perceived competency in IBI. The remaining dependent variables, SEC, self-awareness, self-management, social awareness, relationship skills, responsible decision-making, and aggregated social and emotional teaching practices will be measured by participants' responses on the Self-Assessing Social and Emotional Instruction and Competency survey, or SASEIC (Yoder, 2014a), developed by the Center on Great Teachers and Leaders. Self-awareness, self-management, social awareness, relationship skills and responsible decision-making will each be calculated as the mean of respective Likert measures. Social and emotional teaching practices will be calculated as the mean of aggregated Likert matrices for all ten practices identified by the SASEIC.

Instrumentation

All data in this proposed quasi-experimental, single group, pretest-posttest design study will be collected using the researcher-created Inquiry and Social and Emotional Competencies (ISEC) Qualtrics survey. The ISEC is purposed to assess relationships between dynamics of IBI and SEL. Consisting of 152 items, this survey will be divided into four sections. Section I will measure teacher IBI competency through the adapted QTS protocol (Swan et al., 2020). Section II will measure teacher SECs and social and emotional teaching practices through the adapted Self-Assessing Social and Emotional Instruction and Competency (SASEIC) instrument created by American Institutes for Research (Yoder, 2014a). Section III, will record participants' perceptions of connections between IBI and SEC, and section IV will collect data on participant demographics. To limit survey-length and threats to validity, Section III will only be included in the post-treatment administration of the ISEC.

Section I (items 1-21) has been adapted from the QTS Protocol to be used to measure participants' self-reported competency in IBI. The QTS Protocol (Swan, Crowley & Swan, 2020) was originally created as an observation tool to evaluate teacher candidates' competencies in C3 style IBI. It is closely aligned with outcomes of the *IDM Institute*, and has been validated by a Delphi study (K.Swan, personal communication, November 23, 2021). Upon obtaining permission from the authors, I adapted item syntax in the QTS Protocol, making it more suited for participant self-reporting and clarifying C3 specific language to combat threats to instrumentation bias. I have aligned Likert response options (*I do not implement this practice - I implement this practice extremely well*) for consistency with the SASEIC instrument used in section II of the survey, which has been more fully validated by previous research (Cooney, 2021; Finch, 2016; Yoder, 2014a). Lastly, I have omitted the fourth QTS Protocol Likert matrix

titled “Creates and Maintains Learning Environment” to limit construct redundancy with the SASEIC and reduce the length of the survey. The adapted QTS Protocol has been revised and approved by the original authors for use in this study (J. Lee, personal communication, April 5th, 2022).

Section II of the survey consists of a modified version of the Self-Assessing Social and Emotional Instruction and Competency (SASEIC). The SASEIC was constructed by the Center for Great Teachers and Leaders under the administration of the American Institutes for Research (AIR), with U.S. Department of Education funding to help educators self-assess their own SEC as well as their use of ten social and emotional teaching practices that research has deemed to aid in students’ SEL development (Cooney, 2021; Finch, 2016; Yoder, 2014a; Yoder, 2014b). The SASEIC, originally comprised of three sections, will be adapted by removing the third section, titled “Scoring, Reflection and Action Planning.” Consistent with validating research (Cooney, 2021; Finch, 2016), this modification will shorten the amount of time needed to complete the survey and focus the instrument for quantitative rather than qualitative self-report data. In addition to validation by AIR in its original form, the adapted SASEIC has demonstrated validity and reliability. Researchers generally accept a Cronbach’s alpha score of .70 or higher to determine internal validity and reliability of a tool (Creswell & Cresswell, 2018). Cooney (2021) reported that Cronbach’s alpha tests of the SASEIC ranged from .93 to .95 for SEC and teaching practice subscales, respectively. The SASEIC is accessible on the AIR website and available for public use. I obtained permission to adapt and use this instrument within a larger survey by directly calling the Center for Great Teachers and Leaders at AIR. Permission was granted, as long as the tool is properly cited (AIR, personal communication, November, 2021). The adapted SASEIC (items 22-125) is comprised of a series of Likert matrices to collect participant data.

Section III of the ISEC is purposed to measure participants' perceptions of connections between the four dimensions of the C3 Inquiry Arc (developing questions and planning inquiries, applying disciplinary concepts and tools, evaluating sources and using evidence, and communicating conclusions and taking informed action) (NCSS, 2013), and CASEL's five dynamics of SEC (self-awareness, self-management, social awareness, relationship skills and responsible decision-making) (Durlak et al., 2016). Section III (items 126-145) consists of four Likert matrices, one for each C3 Inquiry Arc dimension. Participants will be asked to rate the level of application of each SEC dynamic within the specified dimension of the C3 Inquiry Arc (ie. *competency is not applicable to D1, competency is utilized in D1, competency is promoted in D1*). Because this section requires participants' more intimate understanding of inquiry-design and IBI, as well as familiarity with SEC terminology, Section III will only appear in the posttest.

Section IV, the final section of the ISEC (items 146-152) collects participants' demographic data such as teaching role, experience, gender and ethnicity. Two pilot administrations of the SASEIC were conducted. The first was conducted with a panel of researchers familiar with IBI and SEL to verify readability and construct validity; and second with a group of social studies teacher candidates, uniformly trained in IBI and SEL to verify findings of the first pilot, and troubleshoot any concerns with mass distribution and response coding.

Analysis

Data will be downloaded from Qualtrics into an IBM SPSS 27.0 data file, then screened for missing variables and information, and tested for assumptions. Finally, data will be analyzed in three phases, guided by each research question. The first two research questions, RQ1 (Is there a difference in self-reported teacher inquiry-based instruction (IBI) competency after

participation in the *IDM Institute*?) and RQ2 (Is there a difference in self-reported participant social and emotional competency (SEC) and social and emotional teaching practices after participation in the *IDM Institute*?) will be addressed solely by comparing pre and post-treatment variable values. Paired sample t-tests will be used to assess post-treatment changes in IBI competency, participant SEC and social and emotional teaching practices.

Treatment dosage may not be enough to observe a noticeable difference in SEC or social and emotional teaching practices directly from the 2-day training, therefore the posttest will be administered two weeks following the treatment, closer to the beginning of the school year to allow for teachers to begin writing IBI into their curriculum, creating the need for RQ3 and more rigorous data analysis.

The final research question (RQ3: What are the connections between *IDM Institute* participants' IBI and SEC?) will be addressed in two stages of quantitative data analysis to more fully understand real and perceived relationships between IBI and SEC. In RQ3.a., (To what degree is IBI competency related to *IDM Institute* participants' self-awareness, self-management, social awareness, relationship skills, responsible decision -making, and overall participant SEC scores?) will be addressed using a reversed multiple regression analysis, reversing the independent and dependent variables for data analysis. Correlational relationships between variables in a multiple regression analysis are bidirectional, and the assignment of the independent and dependent variables can be reversed (Cohen et al., 2013; Pallant, 2020; Salkind, 2010). Therefore, for RQ3 only, SEC means will be treated as independent and IBI competency treated as dependent variables to calculate relationships between IBI and each individual SEC.

There is a possibility that the current study will support the null hypothesis, indicating no significant empirical correlations in IBI and SEC. RQ3.b. (What connections, if any, do IDM

Institute participants construct between dimensions of the C3 Inquiry Arc and SECs?) has been proposed to account for that possibility, and to more fully explore connections of IBI and SEC through participant perceptions. RQ3.b. will be addressed by section III of the ISEC (Items 126-145) asking IDM participants to evaluate any connections they see between the four dimensions of the C3 Inquiry Arc and the SECs of self-awareness, self-management, social awareness, relationship skills and responsible decision-making. The mean of participants' responses to these four Likert matrices will be calculated to determine if and to what degree, participants perceive each of the four C3 dimensions to promote the five SECs.

The atypical form of data analysis in RQ3, including multiple regression analysis is appropriate to detecting empirical relationships between the two models of IBI and SEL, where none has previously been demonstrated. It will also decrease the risk of generating type one error that would come from calculating multiple consecutive variable correlations (Curtin and Schulz, 1998). Methodologists have warned about the fragility of multiple regression analyses. Pallant (2020, p. 153) noted that researchers should have sound justification for the analysis and the order of entering tested variables into the model. Since IBI, and more specifically, the four dimensions of the C3 Inquiry Arc, have never before been empirically related to CASEL's model of SEC, I determined that a two-tiered approach, including the quantification of more subjective response data was necessary in this study to gain a richer understanding of any interplay of the constructs at hand.

Threats to Validity

Like any study, the proposed presents threats to validity; some of which can be mitigated more effectively than others. The pretest-posttest design was proposed as quantitative methods, in comparison to qualitative ones, naturally reduce the risk of researcher bias (Creswell &

Creswell, 2018). However, Reichardt (2019) warned that this design is particularly vulnerable to internal threats to validity. These can be defined as characteristics of the study, participants, or other variables that threaten the researcher's ability to draw correct inferences from the data about an experimental population (Creswell & Creswell, 2018). The proposed study is most vulnerable to history, maturation, mortality, and instrumentation biases. To ensure participants have some opportunity to plan for social and emotional teaching practices, there will be a two week gap between completion of the treatment and the posttest. Admittedly, this increases the possibility that participants might have other experiences that impact their IBI and SEL competencies and practices, which would skew data and challenge validity of conclusions.

The attrition of the sample population is also a concern. After the *IDM Institute* is complete, it is possible that participants, no longer eager to immerse themselves in the professional development or complete a 20-minute survey, will lose interest and dedicated time, and choose to ignore the post-treatment survey. For this reason, in congruence with best practices (Creswell & Cresswell, 2018), I will recruit the largest sample possible from the population of attendees to account for post-treatment dropouts. Further, consistent with previous research, the survey has been streamlined as much as possible, such as eliminating section three of the SASEIC, (see Cooney, 2021 and Finch, 2016) to maximize participants' completion of both iterations of the questionnaire.

Instrumentation bias will be mitigated as much as possible by eliminating question language that assumes a proficiency with IBI and SEL specific terminology. The ISEC will also be audited by an external group of experts in IBI and SEL and piloted with a small group of preservice teachers.

To account for sample attrition as well as construct validity, section III of the ISEC, created by the researcher to gauge participants' perceptions of connections between IBI and SECs will only be administered in the posttest. This will limit time required to complete the pretest and give participants the opportunity during the *IDM Institute* to become familiar with IBI and SEC technical jargon required in section III data collection. The inclusion of a brief SEL language development activity during the *IDM Institute* poses some threat of history bias with the given hypothesis that competency and development in IBI promotes SEC. However, these changes are necessary to ensure participants understand the constructs on which they will be self-reporting as suggested by the literature on survey design and administration best practice (Rea & Parker, 1997). Further, the ISEC has been designed to collect data on IBI and social and emotional competencies and teaching practices, which are well beyond the cognitive demand of vocabulary acquisition, making the threats of history and instrumentation bias acceptable risks to ensure survey construct validity.

Lastly, to give participants more incentive to complete both administrations of the ISEC, they will be entered into a gift card drawing after they have completed pre and post-treatment surveys.

This study will also be vulnerable to threats to external validity, threatening the ability to generalize conclusions outside of the treatment, to the real world of K-12 education (Creswell & Creswell, 2018). As noted in discussion of the population, it is unlikely that the self-selected sample will be large enough to ideally represent and therefore generalize to the American population of social studies teachers. However, Salkind (2004) argued that sample sizes of 20 or even 10 participants should not be dismissed. Lastly, and possibly the most significant threat to external validity, is the delivery method of the professional development. This year's *IDM*

Institute will take place remotely, whereas in past years and likely in the ones to follow, the Institute has been delivered face-to-face. The delivery method of instruction matters to participants' outcomes, and since such a large part of IBI consists of collaboration with diverse peers to solve problems, I wonder if that same social rigor can take place in an online learning scenario. Moreover, it would be problematic to generalize outcomes to similar professional development, which might have different platforms from one year to the next.

Ethical Concerns

Through pre and post treatment survey research, this study involves collecting data from human subjects, and as such, IRB approval will need to be sought. Except for concerns for identifying data and confidentiality, participants in this study will incur no more risk than generally involved in daily life. Since participants' response data will be matched and compared before and after the *IDM Institute*, handling of identifiable information will be an ethical consideration. However, participant identifying information will not need to be maintained throughout the data analysis process. Through Qualtrics, response data from the pre-institute survey will be matched with a participant code for all remaining comparison with post-institute surveys, after which, all identifying data will be destroyed.

Limitations and Delimitations

Several assumptions limit the validity and conclusions from the current study. I assume that instrumentation used to collect data will be valid and reliable to assess the concerned constructs with the population of social studies educators participating in the *IDM Institute*. I also assume that instrumentation will reliably measure the intended constructs, and that participants can understand, and will answer items honestly. If these assumptions are not met, survey results may be skewed, causing type one or type two errors.

The most significant limitation of this study is the lack of a control group, and dependence on a convenience sample to attempt to measure a relationship between IBI according to NCSS, and SEL according to CASEL. Measuring this relationship necessitates a specific treatment, providing a baseline of participant preparation and language within at least one model. In turn, this limits the study to a very specific, somewhat homogenous population. For study feasibility, my professional role and networks facilitated the use of professional development in IBI for that treatment and social studies educators for the population. I also wanted to limit the possibility that the sample population would have significant experiences in SEL within the duration of the study. For these reasons, in addition to concerns for dependable access to participants, I chose not to include pre-service teachers, or students in the population. Lastly, I recognize that the absence of a control or comparison group as well as a dependence on participant perceptions rather than actions also limit the scope of conclusions and generalizations that can be drawn (Creswell & Creswell, 2018).

Considering the noted limitations, the current study is not intended to imply causation from professional development or competency in IBI to SEC, but to simply determine if empirical relationships exist between specific models of IBI and SEC for *IDM Institute* participants, if only in their perceptions. The quantitative study addresses a larger, national population, but generalizing conclusions to other populations or other platforms for IBI professional development would be tenuous.

CHAPTER 4: RESUTS

Introduction

As discussed in Chapter 1, the purpose of this quantitative, single-group pretest-posttest design study was to inform the actions of educational leadership by determining if professional development and competency in C3 inquiry-based instruction (IBI) influences participants' social and emotional competencies (SECs) and social-emotional teaching practices. Organized relative to the three research questions addressed by the current study, this chapter will detail study findings that generally supported the hypothesis of influential relationships between training and competency in IBI and social and emotional competencies and teaching practices.

Procedures and Descriptive Analysis

To ensure that all participants shared a common definition and framework for IBI, the sample consisted of volunteers from the July 2022 *IDM Institute,* a two-day workshop for the development of IBI skills for educators, endorsed by the National Council for Social Studies. All data was collected from this convenience sample using the ISEC Survey to measure participants' self-reported competencies in IBI, SEC and social and emotional teaching practices. All data analyses were conducted using IBM SPSS software, version 25. Generally, Cronbach's alpha measures of .7 and above are regarded as an indicator of instrumentation internal reliability (Cooney, 2021; Pallant, 2020). As illustrated in table 1, using post-*IDM Institute* participant data, the ISEC survey yielded Cronbach's alpha scores ranging from 0.87 to 0.98. This evidence of reliability was also consistent with past research and ISEC pilot testing.

Table 4.1

Post- IDM Institute Instrumentation Descriptive Statistics and Reliability

Subset Variable Based on Likert Scale 1-5	M *([b]n= 31)*	SD *([b]n= 31)*	Chronbach's Alpha
1. IBI_MeanComp2	3.78	0.66	0.97
2. SETeachingPractComp2	4.07	0.50	0.98
3. SelfAwareness2	3.55	0.40	0.93
4. SelfManagement2	3.47	0.40	0.87
5. SocialAwareness2	3.42	0.40	0.90
6. RelationshipSkills2	3.38	0.44	0.92
7. ResponsibleDecMak2	3.42	0.43	0.94
8. SEC_Comp2	3.45	0.38	0.98

Two different, yet related samples will be addressed in the following data analyses. To ensure a large enough sample size for statistical power in research question three, the post-*IDM Institute* ISEC survey was opened to all participant volunteers, regardless of whether or not they had completed pre-treatment survey, creating a slightly larger sample ([b]*n=31*) than would be used for t-test analyses in research questions one and two. After the post- *IDM Institute* administration of the ISEC, participants' survey reference numbers were paired using a *Microsoft Excel* pivot table, isolating only those participants who had completed both pre and posttest measures ([a]*n = 24*). This created a smaller sample for analysis in research questions one and two.

Descriptive data for both sample populations are published in Table 2. As illustrated, the two convenience samples ([a]*n=24,* [b]*n=31*) of 2022 *IDM Institute* participants had very similar demographic compositions. This is unsurprising because 24 of the participants are represented in

both sample populations. The vast majority of participants in both samples identified as female ^{a}n (75%), ^{b}n (77%). The largest age demographic, by percentage was 31-40 years old ^{a}n (37.5%), ^{b}n (38.7%), with roughly equal percentages in the 41-50 and 50+ age ranges. Very few study participants identified in the 20-30 age range ^{a}n (12.9%), ^{b}n (9.7%). The groups identified overwhelmingly as Caucasian ^{a}n (87.5%), ^{b}n (87.1%), with a small percentage of those identifying as Hispanic/Latinx ^{a}n (8.3%), ^{b}n (6.5%) and Asian/Pacific Islander ^{a}n (4.2%), ^{b}n (6.5%) reporting. As expected, both samples were predominantly composed of K-12 teachers ^{a}n (70.8%), ^{b}n (74.2%). In comparing the two samples, the post-*IDM Institute* sample ($^{b}n=31$) yielded a higher percentage of older participants who identified as female K-12 teachers than the paired sample ($^{a}n=24$). Generalizations to other populations should be approached with caution considering the lack of gender and ethnic diversity in these samples.

Table 4.2

Number and Percent of Participants by Demographic Category, by Research Question

Demographics	**Research Questions 1&2: Paired Sample** [a]*n (%)*	**Research Question 3: Total Post- IDM Institute** [b]*n (%)*
Total Group	24 (100%)	31(100%)
--	--	--
Gender	**Gender**	**Gender**
Female	18(75.0%)	24(77.4%)
Male	5(20.8%)	7(22.6%)
Prefer not to answer	1(4.2%)	0(0%)
--	--	--
Age (in Years)	**Age (in Years)**	**Age (in Years)**
20-30	3(12.5%)	3(9.7%)
31-40	9(37.5%)	12(38.7%)
41-50	7(29.2%)	7(22.6%)
50+	5(20.8%)	9(29.1%)
--	--	--
Ethnicity	**Ethnicity**	**Ethnicity**
African American	0(0%)	0(0%)
Asian or Pacific Islander	1(4.2%)	2(6.5%)
Caucasian, non-Hispanic	21(87.5%)	27(87.1%)
Hispanic/LatinX	2(8.3%)	2(6.5%)
--	--	--
Current Role	**Current Role**	**Current Role**
K-12 Teacher	17(70.8%)	23(74.2%)
Administrator/Consultant	3(12.5%)	4(12.9%)
Teacher Preparation	2(8.3%)	2(6.5%)
Other	2(8.3%)	2(6.5%)

Results

Findings from quantitative data analyses are presented below, relative to each respective research question. It should be noted that to assess a predictive relationship between IBI and social and emotional teaching practices and competencies, the proposed study included multiple linear regression for RQ3a analysis. Since the achieved sample size did not meet minimum requirements for multiple linear regression ($n \geq 110$), according to G*Power analysis, simple correlation analysis was used for RQ3a. All other tests were conducted as proposed in Chapter 3.

Research Question One

To answer RQ1 (Is there a difference in self-reported teacher inquiry-based instruction (IBI) competency after participation in the *Inquiry Design Model (IDM) Institute*?) paired samples t-testing was conducted to examine changes in group responses after participation in the *IDM Institute*. Participants' survey ID numbers were matched to determine which participants had completed both pre and post *IDM Institute* administrations of the ISEC survey. Only data from those who had completed both pre and post surveys ($^{a}n = 24$) was retained and screened for missing data and normality. As illustrated in *Table 3*, On average, *IDM Institute* participants' IBI competency increased from pre-test levels ($M = 3.25$, $SD = 0.70$) to post-test levels ($M = 3.94$, $SD = 0.63$), $t(23) = 5.20$, $p = .007$, The observed mean difference was 0.69, 95% CI [0.41, 0.96], which is a large effect ($d = 1.04$; Cohen, 1992).

Table 4.3

Paired Sample-T Tests by Variable

Variable	Pre-IDM Mean ($^a n$ = 24)	Pre-IDM *SD*	Post-IDM Mean ($^a n$ = 24)	Post-IDM *SD*	95% CI for Mean Difference	*t*	*df*	Significance (2-tailed)	Effect size *d*
IBI Competency	3.25	0.70	3.94	0.63	(0.41, 0.96)	5.20	23	<0.001	1.04
SEC Competency	3.24	0.30	3.47	0.39	(0.06, 0.39)	2.83	23	0.009	0.66
Social and Emotional Teaching Practices (composite)	3.60	0.44	4.14	0.51	(0.31, 0.76)	4.85	23	<0.001	1.11

Research Question Two

Analysis for RQ2 (Is there a difference in self-reported teacher social and emotional competency (SEC) and social and emotional teaching practices after participation in the IDM Institute?) was conducted almost identically to RQ1. Participants' survey ID numbers were matched to determine which participants had completed both pre and post *IDM Institute* administrations of the ISEC survey. Only data from those who had completed both pre and post surveys ($^a n$ = 24) was retained and screened for missing data and normality. Paired samples t-testing was conducted to examine differences between group means in pretest and posttest SEC and social and emotional teaching practices. As illustrated in *Table 3*, On average, *IDM Institute* participants' SEC competency increased from pre-test levels (M = 3.24, SD = 0.30) to post-test levels (M = 3.47, SD = 0.39), $t(23) = 2.83$, $p < .001$, The observed mean difference was 0.23, 95% CI [0.06, 0.39], which is a medium to large effect (d = .66; Cohen, 1992). Similarly, *IDM* participants' competency in social and emotional teaching practices also increased from pre-test

levels (M = 3.60, SD = 0.44) to post-test levels (M = 4.14, SD = 0.51), $t(23) = 4.85$, $p < .001$. The observed mean difference was 0.53, 95% CI [0.31, 0.76], which is a large effect (d = 1.11; Cohen, 1992).

Research Question Three, Part A

Chapter 3 proposed multiple linear regression analysis to answer RQ3a (To what degree is IBI competency related to IDM Institute participants' social and emotional teaching practices, self-awareness, self-management, social awareness, relationship skills, responsible decision-making, and overall teacher SEC scores?). However, the achieved sample did not meet minimum requirements for multiple linear regression ($n \geq 110$), according to G*Power analysis, therefore simple correlation analyses were used. Further, RQ3a analysis was conducted with the post-test sample, as it was slightly larger, to maximize statistical power of the correlational analysis conducted. All participants who fully completed the post-*IDM Institute* administration of the ISEC survey were included. Participant responses were screened for missing data, one outlier was removed to yield a sample of ^{b}n=31. When testing for data normality, lack of significance in the Kolmogorov – Smirnov test, indicated normality in IBI mean competency, social and emotional teaching practices, relationship skills and social and emotional competency. Because self-awareness, self-management, social awareness and responsible decision-making showed mild non-normality, these calculations were made using Spearman's, rather than Pearson's Rho.

As illustrated in *Table 4,* in a sample of (^{b}n = 31) *IDM Institute* participants, IBI competency was associated with multiple measures of SEL. Participant's IBI competency (M =3.78, SD = 0.66) was significantly related to their social and emotional teaching practices composite (M = 4.07, SD = 0.50), $\rho = 0.61$, $p < 0.001$; social and emotional competency composite (M = 3.45, SD = 0.38), $\rho = 0.47$, $p = 0.004$; self-awareness (M = 3.55, SD = 0.40), $\rho =$

0.50, p = 0.002; and social awareness (M = 3.42, SD = 0.40) ρ = 0.46, p = 0.005. All of these correlations exhibited a medium to large effect (Vanatta, 2019). These findings suggest that participants who exhibit greater IBI competency also rate themselves higher in social and emotional teaching practices, aggregated social and emotional competencies, as well as self and social awareness. Participants' self-management, relationship skills and responsible decision-making was not significantly related to IBI competency. However, relationship skills, is worthy of note. The relatively high effect size (r^2 = 0.23), in combination with a p-value (α= 0.008) very close to statistical significance, despite a conservatively adjusted alpha ($^{adjusted}\alpha$= 0.007), makes it reasonable to discuss the correlation of relationship skills with IBI competency in terms of practical significance, warranting more research.

Table 4.4

Post IDM Institute Correlations with IBI Competency by Variable

Variable (^{b}n= 31)	**Correlation with IBI Competency** ***R***	**Statistical Significance ($^{adjusted}\alpha$= *0.007*)** ***P***	**Effect Size ($^{adjusted}\alpha$= *0.007*) r^2**	**Effect Size (Vanatta, 2019)**
IBI Competency	1	<0.001	1	--
***Social and Emotional Teaching Practices (composite)**	0.61	<0.001	0.36	Large
***Social and Emotional Competencies (aggregated)**	0.47	0.004	0.22	Medium
***Self -Awareness**	0.50	0.002	0.25	Medium to Large
Self-Management	0.30	0.054	0.09	No significance
***Social Awareness**	0.46	0.005	0.20	Medium
Relationship Skills	0.48	0.008	0.23	No significance
Responsible Decision - Making	0.38	0.018	0.14	No significance

Note: Spearman's correlation reported due to non-parametric data distribution in self-awareness, self- management, social awareness, and responsible decision - making. Bonferroni's adjustment was conducted to calculate new alpha limits; based on 7 statistical tests. α= .007. *Indicates significant results.

Research Question Three, Part B

Participants were asked to report their own perceived connections to answer RQ3b (What connections, if any, do *IDM Institute* participants construct between dimensions of the C3 Inquiry Arc and SECs?) in the final section of the post-*IDM Institute* administration of the ISEC survey. Participants completed four Likert matrices indicating the degree of their perceived application of CASEL's five social and emotional competencies within each dimension of the C3 Inquiry Arc (*1= Competency is not applicable to this dimension, 2=Competency is utilized in this dimension, 3= Competency is promoted in this dimension*). Simple descriptive analysis was used to address this RQ. Response data was incomplete for 4 of the 31 respondents in this section, which may indicate survey fatigue, and therefore analyses and findings related to this RQ should be interpreted with discernment. Only frequency data from the 27 participants who fully completed this section of the ISEC were analyzed.

ISEC survey data indicated that participants perceived substantial connections across dimensions of the C3 Inquiry Arc and SECs. As illustrated in *Figure 4.1*, participants noted a mean of (M=2.53) for all dimensions of the C3 Inquiry Arc, with the means of each individual SEC ranging from 2.30 – 2.74, and low standard deviations ranging from .447 - .609. This indicated that on average, participants perceived that the SECs were either utilized in or promoted by the four dimensions of the C3 Inquiry Arc. This is consistent with theoretical connections between IBI and SEL described in Chapter 2.

Figure 4.1

SEC Promotion within C3 Inquiry Arc Dimensions

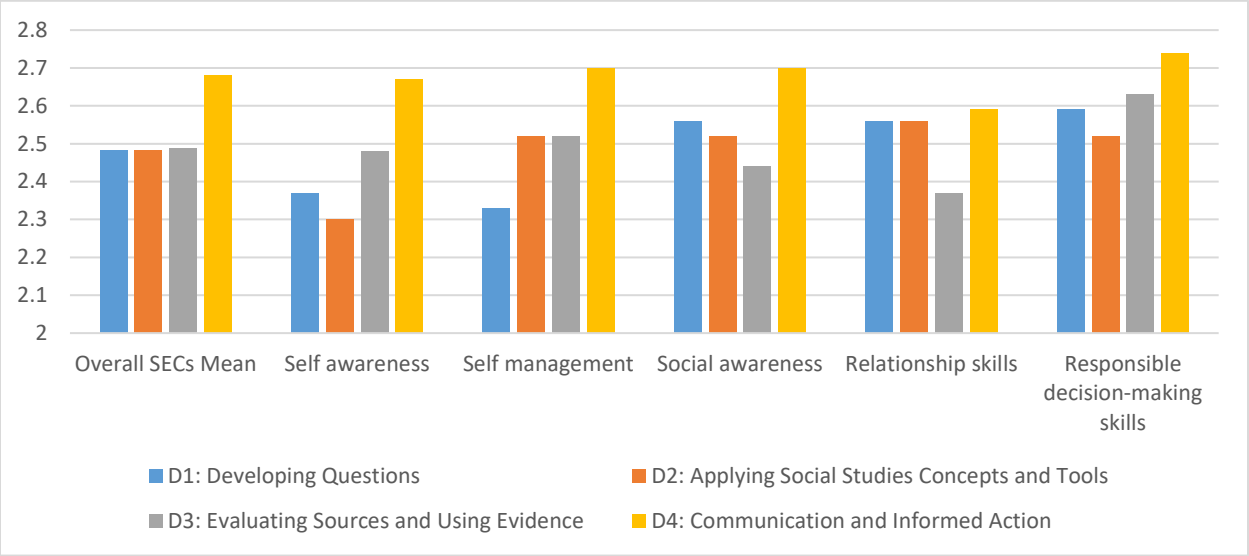


Figure 4.1 illustrates participants' perceived degree of SEC application within each dimension of the C3 Inquiry Arc.

Figure 4.1 illustrates the degree of SEC application in each dimension of the C3 Inquiry Arc, facilitating comparisons, and further illuminating surprises from RQ3a. Participants generally perceived an increasing application of SECs, as they progressed through the four dimensions of the C3 Inquiry Arc. More specifically, responses noted that dimension 1, development of questions (M=2.48), had the least perceived connection, whereas unsurprisingly, dimension 4, communicating conclusions and taking informed action, (M=2.68), yielded the highest perceived connection with all five SECs. It is also worthy of note that social awareness and relationship skills seemed to be exceptions to this trend. Participants reported a high degree of social awareness application early, in dimension 1, developing questions, which decreased significantly through dimensions two and three, with a sharp increase in dimension 4. These results, noting stronger prevalence of social awareness and responsible decision making, especially in the later stages of IBI are generally consistent with research that highlights

collaboration and critical thinking as a result of teachers (Beshears, 2012, Byker, 2017; Preus, 2011) and students experiencing IBI (Batdi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012) and SEC (Taylor et al., 2017).

Conclusions

This single group, pretest -posttest design study assessed the empirical relationships between *IDM Institute* participants' training and competency in C3 IBI, and their self-reported social and emotional competencies and teaching practices. To address research questions, paired sample t-test and correlational analyses were conducted, and findings generally supported the hypothesis that professional development and competency in C3 IBI promotes social and emotional learning. Paired sample t-tests indicated that study participants had significantly higher IBI and social and emotional competency after completion of the *IDM Institute*. Further, participants' IBI competency was positively associated with aggregated SEC scores, social and emotional teaching practices, self-awareness, and social awareness. All of these correlational relationships yielded medium to large effect sizes. Lastly, participants noted to a high degree that SECs are either utilized in or promoted by the four dimensions of the C3 Inquiry Arc. The most significant relationships with SECs were noted in dimension three, analyzing and evaluating sources, and dimension four, communicating conclusions and taking informed action. Implications for these findings will be discussed in the following chapter.

CHAPTER 5: DISCUSSION

Introduction

Literature over the past century has advocated that education should be prepare learners not only for disciplinary pursuits, but also for the civil and civic efficiency needed to meet dynamic demands of future learning, to solve problems in college, career, and civic life. Further, research and legislation over the past decade have more clearly defined processes and outcomes for these goals and evidenced a need for K-12 teachers to infuse Social and Emotional Learning (SEL) into their regular curriculum and daily practices. Research has shown that teacher practices matter in student SEL development (McCoy, 2018a; Voith et al., 2020), but there is a gap in research advising educational leadership on *how* to prepare and empower K-12 teachers to make needed pedagogical changes. The current study examined survey results taken from a convenience sample before and after their participation in the 2022 summer *IDM Institute*, to determine to if professional development and competency in C3 Inquiry-based instruction (IBI) is associated with participants' growth in social and emotional competencies and teaching practices.

SEL is the process of learning a specific framework of content and skills, whereas SECs are the measurable outcome (Durlak et al., 2015). It should be noted that any connections between IBI and SEL, although precluded in the writings of John Dewey, have only been addressed in theoretical literature. To the best of my knowledge, the current study is the first to address quantitative and empirical connections between specifically defined frameworks of IBI and SEL, namely, the C3 Inquiry Arc and CASEL's five social and emotional competencies, respectively. Therefore, there is little literature with which to compare the current results. Study findings detailed in the previous chapter indicate that there are statistically significant

relationships between training and competency in IBI and social and emotional competencies and teaching practices, which has significant implications, and should support assertions for teacher preparation and professional development in the use of IBI. This chapter will discuss interpretations of study results, implications for leadership, educational practice, study limitations and suggest possible aims for future research.

Interpretation of Results Relative to the Literature

To address all research questions in this study, all data were collected using the ISEC survey to measure *IDM Institute* participants' self-assessed IBI, social and emotional competencies and social and emotional teaching practices, and analyzed using IBM SPSS 25. The following section will discuss data analysis from Chapter 4, with respect to existing research on IBI and SEL. Research questions one and two were relatively simple in nature, assessing participants' changes in IBI and SEC after completion of the *IDM Institute*. Because the current study is still relatively exploratory in nature for quantitative research, research question three uses two perspectives to further investigate connections between IBI and SEL. RQ3a explores the relationships between relatively objective measurements of IBI and SEL competencies, similar to existing, mostly quantitative research that has related social and emotional teaching practices to SECs (Cooney, 2021; Finch, 2016; Yoder, 2014b). Therefore, RQ3a is generally associated with teacher training and competency. Conversely, RQ3b explores participants' perceived connections between the four dimensions of IBI and CASEL's five SECs, paralleling, the mostly qualitative body of literature exploring IBI outcomes. RQ3b is generally associated with teachers' IBI practice.

Research Question One

Research question one asked: Is there a difference in self-reported teacher inquiry-based instruction (IBI) competency after participation in the *Inquiry Design Model (IDM) Institute*? When paired-sample t-tests were used to analyze participant response data, results indicated that with large effect and strong significance, participants' IBI competency did increase after participation in the *IDM Institute*. Especially when considering that the *IDM Institute* is only a two-day workshop, these results evince success in building teachers' skills in IBI practice. Further, district administrators and teacher leaders should have no reservations in allocating time and money for this training opportunity for social studies educators.

Research Question Two

Analysis for research question two, (Is there a difference in self-reported teacher social and emotional competency (SEC) and social and emotional teaching practices after participation in the *IDM Institute*?) was conducted almost identically to the paired sample t-tests used in research question one. Similarly, results indicated that participants' SEC and social and emotional teaching practices increased significantly after completion of the *IDM Institute*.

Chapter 2 described theoretical overlap in IBI and SEL (Andolina & Conklin, 2018, 2020; Batdi et al., 2018; Saunders-Stewart et al, 2015; Spronken-Smith et al., 2012) as well as associations between SEC and social and emotional teaching practices (Finch, 2016; Cooney, 2021). Further, planning IBI that includes social and emotional teaching practices gives practitioners opportunities to exercise their own SECs. Given these assumptions, results from RQ2 are consistent with previous research. Finch and Cooney noted strong predictive relationships between teacher SECs and social and emotional teaching practices (2016, 2021). If IBI training increases IBI competency, as indicated in RQ1, which is associated with SE teaching

practices, logically it should also be associated with SEC, at least indirectly. Analysis in the current study underscored that hypothesis as well. This analysis supports the assertions that SEC can be developed without explicit and direct instruction, that SEL can be infused into teaching and instruction, and more poignantly for this dissertation, that training in C3 IBI promotes social and emotional learning. For a deeper understanding of this phenomenon, RQ3 addressed two perspectives to address each SEC individually, assessing which had the highest degree of association with IBI competency.

Research Question Three, Part A

RQ3a (To what degree is IBI competency related to IDM Institute participants' social and emotional teaching practices, self-awareness, self-management, social awareness, relationship skills, responsible decision-making, and overall teacher SEC scores?) was addressed in simple correlation analysis using Pearson's and Spearman's rho to indicate strength and direction of the relationships between participants' IBI competency, aggregated social and emotional teaching practices and each individual SEC. Results indicated significant positive relationships between participants' IBI competency, social and emotional teaching practices, overall SEC, self-awareness, and social-awareness. Analysis in Chapter 4 indicated a medium to large effect, positively associating IBI competency and relationship skills as well. Although the relationship skills effect did not meet statistical significance, considering a conservatively adjusted alpha level, it is worthy of note for practical significance and future study.

Findings from RQ3a generally supported the hypothesis that training and competency in C3 IBI promotes SEL, with some reservations. The demonstrated relationship between IBI, overall participant social and emotional competencies and teaching practices was consistent with the body of SEL literature exploring teacher practices (Cooney, 2021; Finch, 2016; Yoder,

2014b). As discussed in Chapter 2, teacher development in IBI has been associated with a more student-centered approach, application of the inquiry process to practice, as well as communication and collaboration skills (Beshears, 2012; Byker, 2017; Preus, 2011). These outcomes are consistent with the increased self-awareness, social awareness, and social and emotional teaching practices indicated in Chapter 4 analysis.

Because IBI literature highlighted growth in student and teacher critical thinking, communication, and problem-solving skills, the similarity of these constructs lead me to predict that relationship skills and responsible decision-making would also demonstrate significant relationships with IBI competency, which was not indicated by the findings of this study. Although statistical significance was not achieved, for relationship skills, the high effect size (r^2 = 0.23), in combination with a *p*-value (α= 0.008) very close to statistical significance, despite a conservatively adjusted alpha ($^{adjusted}\alpha$= 0.007), make it reasonable to discuss the correlation of relationship skills with IBI competency in terms of practical significance. At the very least, this relationship warrants more research. Refuting the predicted IBI association with responsible decision-making may reflect the differences between quantitative and qualitative assessment. Existing IBI literature, largely qualitative and mixed methods in nature (Beshears, 2012; Byker, 2017; O'Steen, 2008; Preus, 2011), assessed participant perceptions of their competency and use of IBI. In contrast Section II of the ISEC survey, utilized in the present study, assessed social and emotional competencies and teaching practices independently of participants' perceived connections with IBI competency, and arguably, more objectively. These results are also logical when we consider that participants were constructing inquiries, not for their own critical thinking and collaborative problem-solving practice, but for their students. Similar to established

literature, RQ3b measured participants' perceptions of relationships between individual dimensions of C3-style IBI and CASEL's five social and emotional competencies.

Research Question Three, Part B

Participants were asked to report their own perceived connections to answer RQ3b (What connections, if any, do *IDM Institute* participants construct between dimensions of the C3 Inquiry Arc and SECs?) in the final section of the post-*IDM Institute* administration of the ISEC survey. Participants completed four Likert matrices indicating the degree of their perceived application of CASEL's five social and emotional competencies within each dimension of the C3 Inquiry Arc (*1= Competency is not applicable to this dimension, 2=Competency is utilized in this dimension, 3= Competency is promoted in this dimension*). Simple descriptive analyses were used to address this RQ, and indicated that on average, participants perceived that all SECs (M=2.53) were either utilized in or promoted by each of the four dimensions of the C3 Inquiry Arc. In other words, participants perceived that involvement in the process of IBI promotes all SECs, some, more than others.

Figure 4.1 illustrates the degree of SEC application within each dimension of the C3 Inquiry Arc, facilitating comparisons, illustrating similarities with established literature, and illuminating findings from the current study. Responses indicated that C3 Dimension 1, development of questions (M=2.48), had the least perceived connection, whereas unsurprisingly, Dimension 4, communicating conclusions and taking informed action (M=2.68), yielded the highest perceived connection with all five SECs. As illustrated in *figure 4.1*, participants generally perceived an increasing application of SECs, as one progress through the four dimensions of the C3 Inquiry Arc. A notable difference from RQ3a findings, participants perceived responsible decision-making as the most utilized SEC in three of the four dimensions

of the C3 Inquiry Arc. The pervasiveness of responsible decision-making in RQ3b analysis is logical and supports the body of IBI literature, when considering that section III of the ISEC survey assesses participants' perceived connections between IBI and SECs while engaging in the process of IBI; as opposed to the planning of IBI as discussed in RQ3a.

In conclusion, it appears that participants' independently measured competency in planning IBI is related to their own social and emotional teaching practices and some SECs, namely self-awareness and social awareness. In contrast, participants perceived that all SECs, and more significantly, self-management, relationship skills and responsible decision-making, are promoted, when taking part in the IBI process.

Implications for Leadership

Findings of the current study support the hypothesis that training and competency in IBI promote SEL, presenting significant implications for decision makers in education. Educational leaders must consider that researchers and policy makers have generally supported teachers' SEL development, empowering them to more intentionally infuse social and emotional interactions and teaching practices, which in turn facilitates student development (Education First, 2016; Jennings & Greenberg, 2009; Schonert-Reichl et al., 2017; Yoder, 2014a). Unsurprisingly, educators have expressed needs for professional development in SEL and its integration into K-12 curriculum and instruction, and look to state and local policy-makers to explore and fund appropriate opportunities (McCoy, 2018a; Nenonene et al., 2019; Voith et al., 2020). Further, similar to SEC, IBI competency has been noted to empower teachers with skills to adapt to and navigate the dynamic demands of future learning challenges (Preus, 2011). Working for this end, has been termed adaptive leadership (Heifetz et al., 2009; Northouse, 2019), and has been promoted for leaders in education, under the pretense that empowered teachers have the

capabilities to adapt to the dynamic demands of K-12 classrooms, in a quickly changing world (Bagwell, 2020; Siers et al., 2020), giving students the stability and support they need to be successful.

Teacher SEC development has shown promise as one potential solution to meet these needs, but there has been recent backlash against SEL initiatives (Kinkade & Hixenbaugh, 2021; McCaughey, 2021). Existing literature and the findings from the current study support that development in IBI may be an effective, and less controversial alternative to empower educators to adapt with skills of social and emotional efficacy, indirectly benefitting K-12 students, while still attending to academic outcomes (Byker et al., 2017; Colclasure, 2020; Grant, 2013; Osteen et al., 2008; Utah BOE,2020).

Leaders in higher education should reaffirm the findings and suggestions of the 1998 Boyer Commission (Barrow, 2006; Boyer Commission on Educating Undergraduates in the Research University, 1998; Levy, 2013) in making IBI a foundation for university preparation, especially in teacher education programs. State and local administrators should look for opportunities to expand access to and funding for IBI professional development, at least for social studies educators. C3-style inquiry and the *IDM Institute* in particular, have proven to be a valuable pedagogical framework, and corresponding professional development for educators. *C3 Teachers* and the facilitators of the *IDM Institute*, like other IBI scholars, should consider the overlap of IBI and social and emotional teaching practices, to better promote latent SEL benefits of professional development in IBI, and to provide purposeful opportunities for attendee metacognition on their SEC as well as IBI development. This investment in educator personal and professional development may also help to address teacher stress and shortages.

Implications for Practice

Research on SEL infusion into instructional practices is relatively nascent. However, scholars have called for more, as it offers the opportunity to empower more educational leaders and teachers to problem-solve and adapt to their own contextual challenges (Cooney, 2021; Education First, 2016; Finch, 2016; Yoder, 2014b). The current study supports these assertions and highlights C3-style inquiry as an overarching pedagogical framework for IBI that also promotes infusion of social and emotional teaching practices. Analyses in this study suggest that professional development in, and use of C3-style IBI would benefit social studies teachers as individuals, and enrich their instructional practice, better preparing students for the dynamic demands of college, career and civic life. Social Studies teachers should seek opportunities for professional development in C3 IBI at the local, state or national level, such as the *IDM Institute.* They should also work to engrain collaborative IBI in their curriculum and instruction, helping students to understand the intended social and emotional in addition to academic outcomes. Teachers and students should be expected struggle in developing skills for IBI (Colclasure et al., 2020) and SEL, therefore instructional supports and patience will be needed. How much of this struggle is beneficial, and how to mitigate it for student growth is a topic for more research.

In a research-to-practice brief comparing pedagogical models for K-12 teachers, the Utah State Board of Education compared IBI to direct instruction (2020). The authors asserted that IBI was better for the development of student autonomy and equity. More specifically, they noted that explicit instruction facilitated students in retaining content knowledge and integrating new material, whereas IBI promoted student choice, independent decision-making, higher level thinking, and sense-making through the development of knowledge and skills based in a specific discipline (p. 2). The current study supports these suggested benefits of IBI, especially models of

IBI that prioritize cooperative learning and communication such as the C3 Inquiry Arc. K-12 teachers often focus on explicit instruction to prepare students for the wrote knowledge demands of standardized testing. However, for the adaptive leadership that aligns with Dewey's philosophy of preparing learners, or followers for future learning, or civic efficiency, both pedagogical frameworks will be needed, requiring more implementation of IBI in K-12 classrooms.

Study Limitations and Suggestions for Future Research

Several limitations of this study, namely instrumentation validity, teacher self-reporting, and dependence on a relatively small convenience sample limit the predictive generalizations that can be made to other populations. Because this study was exploratory in nature, attempting to quantitatively assess an empirical relationship between IBI and SEL, these limitations do not diminish the contribution of this study. They do highlight the need to approach generalization with caution, and opportunities for future research exploration.

Instrumentation validity is the first, and most obvious consideration. Study conclusions rest on the assumptions of validity and reliability of the ISEC survey used to collect data assessing participants' competencies in IBI and SEL. This instrument was created by combining an adapted QTS Protocol (Swan et al., 2020) and the SASEIC (Yoder, 2014a). Although the parts have been independently validated by prior research, my adaptations to the QTS Protocol and the combination of these instruments in the ISEC had not been validated until the current study. Study findings assumed that participants understood and answered items honestly. Before study data was collected, a panel of SEL and IBI scholars reviewed the instrument for construct validity. Pilot testing and reliability testing, yielding Cronbach's Alpha scores ranging from 0.87 to 0.98 generally supported assumptions of validity and reliability of the instrument. The ISEC

performed well, supporting study conclusions, and should be seen as a viable IBI and SEL assessment. However, because this was a relatively small study with a homogenous sample, more research is needed within other contexts to add validity to the instrument.

External validity presents the most significant limitation of this study. For study feasibility, my professional role and networks facilitated use of the 2022 Summer *IDM Institute* for the treatment, and its participants for the study population. I also wanted to limit the possibility that the sample population would have significant experiences in SEL, or other models of IBI within the duration of the study. For these reasons, in addition to concerns for dependable access to participants, I chose convenience sampling and did not include a control group. These decisions also limited the sample size. I recognize that the absence of a control or comparison group as well as a dependence on participant self-report data rather than actions also limit the scope of conclusions that can be drawn (Creswell & Creswell, 2018) to other populations.

This study sample included 27 participants for t-test analysis, and 31 participants for correlational analysis, which met minimal requirements for statistical power (G*Power). The sample represented 20-23% of the 132 participant 2013 *IDM Institute* population, which also met accepted minimums to generalization to the population (Creswell & Creswell, 2018). However, small sample sizes are detrimental to statistical power and therefore should be considered a limitation of this study. Researchers generally note that a sample size of 30 or more is desirable (Salkind, 2004), yet others suggest that research with sample sizes as low as 10-20 participants should still not be ignored (Hendricks, 2019). Although not ideal, this small convenience sample met requirements of the analysis plan of this exploratory study. Findings should not be dismissed, yet should be verified. Future researchers should attempt to garner larger sample sizes

to verify the findings of this study, which would also allow for more powerful statistical analyses, such as multiple regression, that could be used to further explore any predictive relationship between IBI and SEL.

Also worthy of note is the limited demographic representation within the study population. The sample consisted of mostly women, 75.0%(^{a}n) and 77.4%(^{b}n). It is also problematic to generalize results from this convenience sample of motivated *IDM Institute* participants to the K12 teacher population at large. I urge researchers to further explore IBI as an instructional framework to promote SEL with more representative purposive sampling, in other population contexts, such as science, math or integrated language arts educators. This would also open opportunities to compare the merits of IBI frameworks other than C3 Inquiry, such as the 5E Model, promoted within in science education.

The secondary benefits of the current study also rest on the assumption that K12 teachers' social and emotional competency and teaching practices significantly influence student development (Education First, 2016; Jennings & Greenberg, 2009; Schonert-Reichl et al., 2017; Yoder, 2014a). Research supporting this is still nascent and largely theoretical in nature. Future research might further explore the translation of SEC from teachers to learners, addressing the question: "Does teacher SEC lead to student SEC growth and the positive outcomes associated with it?" Lastly, especially during the pandemic, SEL has been promoted for student and teacher mental health outcomes (Ferren, 2021; Nenonene et al., 2020). Just as IBI has common outcomes in academic success and prosocial behaviors (Batdi et al., 2018; Saunders-Stewart et al., 2015; Spronken-Smith et al., 2012) with SEL interventions (Durlak et al., 2011; Taylor et al., 2017), researchers might assess if frameworks and interventions for IBI are directly associated positive student and teacher mental health outcomes.

Considering the noted limitations, the current study was not intended to imply causation from professional development or competency in IBI to SEC, but to simply determine if empirical relationships exist between specific models of IBI and SEC for *IDM Institute* participants, if only in their perceptions. Study findings supported the hypothesis that C3 Inquiry promotes social and emotional learning and teaching practices within a national population of social studies educators. Although they are powerful, generalizing these conclusions to other populations or other platforms for IBI professional development would be tenuous, which presents opportunities for future researchers.

Conclusions

Long before John Dewey, scholars and leaders have advocated that education also look to the social and emotional competencies, or the civic and social efficiency of our citizenry, for the benefit of our institutions and our democracy. Researchers over the last two decades have given this effort a name and structure in SEL, facilitating a better understanding of SEL outcomes, assessment and development. The value of SEL has been underscored by the COVID-19 pandemic's isolating effects, and the need to work for SEL in K-12 classrooms has been demonstrated by state and national policymakers. Yoder and the American Institutes for Research created a foothold for practitioners in identifying specific and research-based social and emotional teaching practices (Yoder, 2014a; Yoder, 2014b), but fell short in identifying pedagogical frameworks that might build teachers' social and emotional competencies and systematically support their use of these practices. Findings of the current study contribute to this body of research, at least among social studies educators, supporting the hypothesis that professional development in IBI promotes social and emotional competencies and teaching practices. I entreat educational leaders to seek and provide practitioners with opportunities for

professional development in SEL and IBI. To work for student actualization without detriment to student academic performance (Saye et al., 2013), I encourage educators to seek opportunities for SEC development and to integrate IBI and social and emotional teaching practices into their classrooms. Lastly, findings of the current study have painted new avenues for future research. The ISEC survey tool, created by combining an adapted QTS Protocol (Swan et al., 2020) and the SASEIC (Yoder, 2014a), has demonstrated reliability in measuring educators' competencies in IBI in tandem with social and emotional competencies and teaching practices. To verify and further explore the generalizability of these findings, I challenge future researchers to assess instrumentation validity, as well as connections between IBI and SEC in other contexts with other populations.

REFERENCES

Andolina, M. W., & Conklin, H. G. (2018). Speaking with confidence and listening with empathy: The impact of "Project Soapbox" on high school students. Theory and Research in Social Education, 46(3), 374–409.

Andolina, M. W., & Conklin, H. G. (2020). Fostering democratic and social-emotional learning in action civics programming: Factors that shape students' learning from "Project Soapbox." American Educational Research Journal, 57(3), 1203–1240.

Association for Supervision and Curriculum Development. (2020). The learning compact renewed: Whole child for the whole world.

Bagwell, J. (2020). Leading Through a Pandemic: Adaptive Leadership and Purposeful Action. Journal of School Administration Research and Development, 5, 30–34.

Barton, K. & Levstik, L. (2004). Teaching History for the Common Good. Routledge. (Chapter 10-Inquiry)

Batdi, V., Semerci, C., & Aslan, A. (2018). A Meta-Analytic and Thematic Study Concerning the Effect of Inquiry Based Instruction on Learners' Achievement. Educational Policy Analysis and Strategic Research, 13(2), 51–68.

Belfield, C., Bowden, A. B., Klapp, A., Levin, H., Shand, R., & Zander, S. (2015). The economic value of social and emotional learning. Journal of Benefit-Cost Analysis, 6(3), 508-544. doi:10.1017/bca.2015.55

Beshears, C. M. (2012). Inquiry-Based Instruction in the Social Studies: Successes and Challenges [ProQuest LLC]. In ProQuest LLC.

Boyer Commission on Educating Undergraduates in the Research University, S. B. N. (1998). Reinventing Undergraduate Education: A Blueprint for America's Research Universities.

Byker, E. J., Coffey, H., Harden, S., Good, A., Heafner, T. L., Brown, K. E., & Holzberg, D. (2017). Hoping to Teach Someday? Inquire Within: Examining Inquiry-Based Learning with First-Semester Undergrads. Journal of Inquiry and Action in Education, 8(2), 54–80

Collaborative for Academic Social and Emotional Learning (CASEL). (2022). Fundamentals of SEL. https://casel.org/fundamentals-of-sel/

Collaborative for Academic Social and Emotional Learning. (2017). Key implementation insights from the Collaborating Districts Initiative: A multiyear effort to help school districts integrate social and emotional learning across all aspects of their work: what have we learned? What impact have we seen? What's next? file:///C:/Users/lewanda/Downloads/CASEL-Gateway-Key-Insights-from-CDI.pdf

Collaborative for Academic Social and Emotional Learning (n.d.). *SEL policy at the state level*. CASEL. https://casel.org/systemic-implementation/sel-policy-at-the-state-level/

Colclasure, B. C., Thoron, A. C., Osborne, E. W., Roberts, T. G., & Pringle, R. M. (2020). Comparing the 5E Method of Inquiry-Based Instruction and the Four-Stage Model of Direct Instruction on Students' Content Knowledge Achievement in an ENR Curriculum. Journal of Agricultural Education, 61(3), 1–21.

Conklin, H. G., & Hughes, H. E. (2016). Practices of Compassionate, Critical, Justice-Oriented Teacher Education. Journal of Teacher Education, 67(1), 47–60.

Cooney, F. A. (2021). Teachers' perceptions of social–emotional competencies and social–emotional learning practices [ProQuest Information & Learning]. In Dissertation Abstracts International Section A: Humanities and Social Sciences (Vol. 82, Issue 9–A).

Council for the Accreditation of Educator Preparation (CAEP). *SPA standards and report forms: National Council for the Social Studies*. Council for the Accreditation of Educator Preparation: accreditation & program review. http://caepnet.org/accreditation/caep-accreditation/spa-standards-and-report-forms/ncss

Creswell, J.W., and Creswell, J.D. (2018). Research Design: Qualitative, Quantitative and Mixed Methods Approaches. SAGE.

Curtin F, Schulz P. (1998). Multiple correlations and Bonferroni's correction. Biol Psychiatry. Oct 15;44(8):775-7. doi: 10.1016/s0006-3223(98)00043-2. https://pubmed.ncbi.nlm.nih.gov/9798082/

Dague, C. T. (2020). In support of students' needs: Exploring the benefits of the Inquiry Design Model. Social Education, 84(1), 66–71.

Dewey, J. (1916). Democracy and Education: An introduction to the philosophy of education. Create Space.

Dewey, J. (1938). Experience and education. Free Press.

Durlak, J. A., Domitrovich, C. E., Weissberg, R. P., & Gullotta, T. P. (2015). Handbook of social and emotional learning: Research and practice.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. Child Development, 82(1), 405–432.

Education First. (2016). *Social and emotional learning: Why students need it. What districts are doing about it.* [Report]. NoVo Foundation.

Essamuah, Z. (Writer), (2022, January 11). Covid cases cause teacher shortage, putting strain on U.S. education system [TV series episode]. In *NBC News Now*. NBCNews.com. https://www.nbcnews.com/now/video/covid-cases-cause-teacher-shortage-putting-strain-on-u-s-education-system-130649157613

Ferren, M. (2021, July 20). Social and emotional supports for educators during and after the pandemic. Center for American Progress. https://americanprogress.org/article/social-emotional-supports-educators-pandemic/

Grant, S., Hamilton, L., Wrabel, S., Gomez, C., Auger, A., Tamargo, J., Unlu, F., Chavez-Herrierias, E., Baker, G., Barrett, M., Harris, M., & Ramos, A. (2017). How the Every Student Succeeds Act can support Social and Emotional Learning. RAND. https://www.wallacefoundation.org/knowledge-center/Documents/Social-and-Emotional-Learning-Interventions-Under-ESSA-brief.pdf

Grant, S. G. (2013). From Inquiry Arc to instructional practice: The potential of the C3 Framework. Social Education, 77(6), 322–326.

Hadar, L. L., Ergas, O., Alpert, B., & Ariav, T. (2020). Rethinking teacher education in a VUCA world: student teachers' social-emotional competencies during the Covid-19 crisis. European Journal of Teacher Education, 43(4), 573–586. https://doi-org.ezproxy.bgsu.edu/10.1080/02619768.2020.1807513

Hansen, M., Levesque, E., Valant, J., & Quintero, D. (2018, June 27). *2018 Brown Center Report on American Education: Understanding the social studies teacher workforce* [Brown Center Report]. Brookings. https://www.brookings.edu/research/2018-brown-center-report-on-american-education-understanding-the-social-studies-teacher-workforce/

Heifetz, R., Grahow, A., & Linsky, M. (2009). The practice of adaptive leadership. Harvard Business Review Press.

Huang, C. (2017). Time spent on social network sites and psychological well-being: A meta-analysis. Cyberpsychology, Behavior, and Social Networking, 20(6), 346–354. https://doi-org.ezproxy.bgsu.edu/10.1089/cyber.2016.0758

Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. Review of Educational Research, 79, 491–525.

Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. Washington, District of Columbia: American Public Health Association. doi:10.2105/AJPH.2015.302630

Kinkade, T., & Hixenbaugh, M. (2021, November 15). Parents protesting 'critical race theory' identify another target: Mental health programs. NBC News. https://www.nbcnews.com/news/us-news/parents-protesting-critical-race-theory-identify-new-target-mental-hea-rcna4991

Kravitz, L. (2016). *Understanding and translating research* (13(2)). IDEA Fitness Journal. https://www.unm.edu/~lkravitz/Article%20folder/UnderstandingResearch.html

Lee, J., & Swan, K. (2013). Is the Common Core good for social studies? Yes, but… Social Education, 77(6), 327–330.

Levine, P., & Kawashima-Ginsberg, K. (2017, September 21). The republic is (still) at risk—and civics is part of the solution (A briefing paper for the Democracy at a Crossroads National Summit) [Monograph]. Retrieved from https://www.civxnow.org/static/media/SummitWhitePaper.fc2a3bb5.pdf

Levy, B. L. M., Thomas, E. E., Drago, K., & Rex, L. A. (2013). Examining Studies of Inquiry-Based Learning in Three Fields of Education: Sparking Generative Conversation. Journal of Teacher Education, 64(5), 387–408.

McCoy, M. K. (2018a). Examining high school teachers' experiences with social and emotional learning: An interpretative phenomenological analysis [ProQuest Information & Learning]. In Dissertation Abstracts International Section A: Humanities and Social Sciences (Vol. 78, Issue 12–A(E)).

McCoy, J., Rahman, T., & Somer, M. (2018b). Polarization and the global crisis of democracy: Common patterns, dynamics, and pernicious consequences for democratic polities doi:10.1177/0002764218759576

Martell, C. C. (2019). Barriers to inquiry-based instruction: A longitudinal study of history teachers. Journal of Teacher Education, 71(3), 279–291.

McCaughey, B. (2021, November 23). 'Social and emotional learning' is often just cover for progressive indoctrination of kids [Editorial]. *New York Post*. https://nypost.com/2021/11/23/social-and-emotional-learning-is-often-cover-for-progressive-indoctrination/

McHugh Power, J. E., Steptoe, A., Kee, F., & Lawlor, B. A. (2019). Loneliness and social engagement in older adults: A bivariate dual change score analysis. Psychology & Aging, 34(1), 152-162. doi:10.1037/pag0000287

National Council for the Social Studies. (2013). College, Career & Civic Life C3 Framework for Social Studies State Standards. 5-6. Retrieved February 12, 2019.

National Education Association. (1975, 2020, September 14). *Code of ethics for educators*. National Education Association. https://www.nea.org/resource-library/code-ethics-educators

Nenonene, R. L., Gallagher, C. E., Kelly, M. K., & Collopy, R. M. B. (2019). Challenges and opportunities of infusing social, emotional, and cultural competencies into teacher preparation: One program's story. Teacher Education Quarterly, 46(4), 92–115

Newmann, F.M., & Wehlage, G.G. (1993). Five standards of authentic instruction. Educational Leadership, 50 (7), 8-12.

New, Swan, Lee, & Grant. (2021). The state of social studies standards: What is the impact of the C3 Framework. Social Education, 85(4), 239-246.

Nicolaides, A., & McCallum, D. C. (2013). Inquiry in action for leadership in turbulent times: Exploring the connections between transformative learning and adaptive leadership. Journal of Transformative Education, 11(4), 246–260.

Northouse, P. G. (2019). Leadership (8th ed.). Sage.

Oberle, E., Domitrovich, C. E., Meyers, D. C., & Weissberg, R. P. (2016). Establishing systemic social and emotional learning approaches in schools: A framework for school-wide implementation. Cambridge Journal of Education, 46(3), 277-297.

Odgers, C. L., & Jensen, M. R. (2020). Annual research review: Adolescent mental health in the digital age: Facts, fears, and future directions Wiley-Blackwell Publishing Ltd. doi:10.1111/jcpp.13190

O'Steen, B. (2008). Are Dewey's Ideas Alive and Well in New Zealand Undergraduate Education? Kiwi Case Studies of Inquiry-Based Learning. Journal of Experiential Education, 30(3), 299–303

Pallant, J. (2020). SPSS Survival Manual (7th ed.). McGraw Hill.

Pea, R., Nass, C., Meheula, L., Rance, M., Kumar, A., Bamford, H., . . . Zhou, M. (2012). Media use, face-to-face communication, media multitasking, and social well-being among 8- to 12-year-old girls American Psychological Association. doi:10.1037/a0027030

Pedaste, M., Mäeots, M., Siiman, L. A., de Jong, T., van Riesen, S. A. N., Kamp, E. T., Manoli, C. C., Zacharia, Z. C., & Tsourlidaki, E. (2015). Phases of inquiry-based learning: Definitions and the inquiry cycle. Educational Research Review, 14, 47–61. https://doi-org.ezproxy.bgsu.edu/10.1016/j.edurev.2015.02.003

Pierce, D. (2019). What employers want: Employers are looking to community colleges for help in teaching soft skills. Community College Journal. Retrieved from http://ezproxy.bgsu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1200812&site=ehost-live&scope=site https://www.aacc.nche.edu/publications-news/community-college-journal/

Preus, J. A. O., IV. (2011). Examining an Inquiry-Based Approach for New Teacher Training [ProQuest LLC]. In ProQuest LLC.

Putnam, R. (2000). Bowling Alone. New York, NY: Simon & Schuster.

Rea, L. M., & Parker, R. A. (1997). *Designing and conducting survey research* (2nd ed.). Jossey-Bass.

Reichardt, C. S. (2019). Quasi-experimentation:A guide to design analysis. The Guilford Press.

Salkind. N. J. (2004). *Statistics for people who (think they) hate statistics.* 2nd ed. Thousand Oaks, CA: Sage Publications.

Sample Size Calculator. (2019, July). Retrieved May 7, 2020, from Qualtrics website: https://www.qualtrics.com/blog/calculating-sample-size/

Saunders-Stewart, K., Gyles, P., Shore, B., & Bracewell, R. (2015). Student outcomes in inquiry: Students' perspectives. Learning Environments Research, 18(2), 289-311.

Saye, J. & Social Studies Inquiry Research Collaborative (SSIRC) (2013). Authentic pedagogy: Its presence in social studies classrooms and relationship to student performance on state-mandated tests, Theory & Research in Social Education, 41:1, 89-132, DOI: 10.1080/00933104.2013.756785

Schonert-Reichl, K. A., Kitil, M. J., & Hanson-Peterson, J. (2017). To reach the students, teach the teachers: A national scan of teacher preparation and social and emotional learning. A report prepared for the Collaborative for Academic, Social, and Emotional Learning (CASEL). Vancouver, B.C.: University of British Columbia.

Schwab, J. J. (1958). Teaching of science as inquiry. Bulletin of the Atomic Scientists, 14, 374–379.

SEL4US. (n.d.). Social Emotional Learning Bills. Social Emotional Learning Alliance for the United States. Retrieved January 22, 2022, from https://sel4us.org/advocacy/bills-we-track/

Siers, R., Fox, J. T., McCormick, K., & Paprzycki, P. (2020). Developing PDS Student Interns with Mentor Adaptive Leadership. School-University Partnerships, 13(2), 18–25.

Swan, K., Crowley, R., & Swan, G. (2020, March). The signal and the noise: Coaching pre-service candidates to teach with questions, tasks, and sources. *Social Education*, *84*(2), 100-107.

Spronken-Smith, R., Walker, R., Batchelor, J., O'Steen, B., & Angelo, T. (2012). Evaluating student perceptions of learning processes and intended learning outcomes under inquiry approaches. Assessment & Evaluation in Higher Education, 37(1), 57–72. doi:10.1080/02602938.2010.496531

Strozewski, Z. (2022). Social Emotional Learning' Becomes Latest Battleground in School Curriculums. Newsweek.com. Retrieved January 21, 2022, from https://www.newsweek.com/social-emotional-learning-becomes-latest-battleground-school-curriculums-1671698

Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. United States: Blackwell Publishers. doi:10.1111/cdev.12864

Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. United States: Blackwell Publishers. doi:10.1111/cdev.12864

Twenge, J. M., Cooper, A. B., Joiner, T. E., Duffy, M. E., & Binau, S. G. (2019). Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005–2017. Journal of Abnormal Psychology, 128(3), 185–199.

Twenge, J. M. (2019). More time on technology, less happiness? Associations between digital-media use and psychological well-being doi:10.1177/0963721419838244

Utah State Board of Education. (2020). Instructional Approaches: Explicit and Inquiry-Based Instruction. In Utah State Board of Education. Utah State Board of Education.

Voith, L. A., Yoon, S., Topitzes, J., & Brondino, M. J. (2020). A feasibility study of a school-based social emotional learning program: Informing program development and evaluation doi:10.1007/s10560-019-00634-7

Yoder, N., & Center on Great Teachers and Leaders at American Institutes for Research. (2014a). Self-assessing social and emotional instruction and competencies: A tool for teachers. In Center on Great Teachers and Leaders. Center on Great Teachers and Leaders.

Yoder, N., & Center on Great Teachers and Leaders at American Institutes, for Research. (2014b). Teaching the whole child: Instructional practices that support social-emotional learning in three teacher evaluation frameworks. Research-to-practice brief. Revised edition. Center on Great Teachers and Leaders.

Zhao, Y. (2020). Another education war? The coming debates over social and emotional learning. Phi Delta Kappan. https://kappanonline.org/another-education-war-social-emotional-learning-debates-zhao/

Informed Consent

APPENDIX A. PRE TEST INSTRUMENT

Q1.

Informed Consent:
Inquiry and Social and Emotional Competency (ISEC) Pre-IDM Institute Survey

Hello Participant,

INTRODUCTION: My name is Art Lewandowski, and likely similar to you, I am an educator and student of inquiry. For my doctoral study at Bowling Green State University and in collaboration with my Dissertation Chair, Dr. Christy Galletta-Horner, and Dr. John Lee and the Inquiry Design Model (IDM) Institute, I am researching connections between inquiry-based instruction and social and emotional learning. As a participant of the Summer 2022 IDM Institute, I am inviting you to take part in this study by completing the following survey.

PURPOSE: The purpose of this study is to assess C3 inquiry-based instruction as a framework to promote social and emotional competency and instructional practices. This survey will quantify and compare competencies in inquiry-based instruction and social and emotional learning before and after participation in the IDM Institute. It will also assess participants' perceptions of connections between the C3 Inquiry Arc and social and emotional competencies.

PROCEDURE: Should you agree to participate, you will be asked to self-report on questions related to your competency in implementing practices in inquiry-based instruction and social and emotional competencies and teaching practices, as well as

demographics (e.g., race, gender) before and after your participation in the summer 2022 IDM Institute. Your responses will be kept completely confidential. The pre-institute ISEC survey should take 15-20 minutes to complete, and the post-institute survey should take 20-25 minutes to complete. All participants will be entered into a raffle for $25 gift cards to Starbucks after completion of both pre and post IDM Institute surveys. Approximately 15% of participants will win a gift card. *Note: If you close your browser before submission, you may lose all survey progress.

VOLUNTARY NATURE: Participation in this study is completely voluntary, and you have the right to withdraw at any point during the study without explanation or penalty. Your decision to participate or not will have no impact on your relationship with Bowling Green State University.

CONFIDENTIALITY PROTECTION: All response data will be downloaded and stored on the researcher's password protected hard drive. After the pre and post-institute survey data have been matched with a participant code and gift card drawings have been awarded, all identifying data will be destroyed. You should not leave the survey open if you are using a public computer or a computer that others may have access to. You should also clear your browser cache and page history after completing the survey.

RISKS: Risks in this study are no greater than those experienced in everyday life. The primary risk to you is a breach of data. The steps outlined above minimize this risk by making your survey responses anonymous (with no identifying information) as soon as possible.

BENEFITS: This study will benefit future educators and leaders in education who seek professional development opportunities to meet positive academic as well as social and emotional aims for teachers and students. A foundation for professional growth, this study will provide you with an opportunity to reflect on your own competencies and perceptions of inquiry-based instruction and social and emotional learning.

CONTACT INFORMATION: For questions regarding the nature, scope, methods or any other inquiry regarding this study, please contact me at Lewanda@bgsu.edu, or (419) 889-7551; or Dr. Christy Galletta-Horner at Cgallet@bgsu.edu, or (419) 372 -7401. You may also contact the Chair of the Bowling Green State University Institutional Review Board at 419-372-7716 or irb@bgsu.edu if you have any questions about your rights as a participant in this research.

INFORMED CONSENT: I have been informed of the purposes, procedures, risks and benefits of this study. I have had the opportunity to have all of my questions answered and I have been informed that my participation is completely voluntary. I agree to participate in this research.

By clicking the consent button below, you acknowledge:

- Your participation in the study is voluntary.
- You are at least 18 years of age.
- You are aware that you may choose to terminate your participation at any time for any reason.

○ I consent, begin the study

○ I do not consent, I do not wish to participate

Survey Preview

Q31. Thanks for volunteering to take part in this study! This ISEC Survey will guide you through 4 sections:

I. Inquiry-Based Instruction Competency (Adapted from QTS Protocol)
II. Social and Emotional Instruction and Competencies (Adapted from SASEIC)

1. Social Interactions
    - Implementation of Social Interactive Practices
    - Self-Assess Participants' Social and Emotional Competencies
2. Instructional Interactions
    - Implementation of Interactive Instructional Practices
    - Self-Assess Participants' Social and Emotional Competencies

III. Demographics

*Please do not close your browser before you are finished as your progress might be lost.

Section I: Inquiry Based Instruction (Adapted QTS)

IBI_Q. Please rate your competence in using questions during instruction.

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
Use of compelling questions to frame and guide instruction.	○	○	○	○	○
Compelling questions are rigorous, relevant and provide students an opportunity to craft evidence-based arguments.	○	○	○	○	○
Building students' knowledge through the use of supporting questions.	○	○	○	○	○
Supporting questions are intentionally sequenced and clearly related to the big ideas within the compelling question.	○	○	○	○	○
Supporting questions are aligned with tasks and sources.	○	○	○	○	○
Instructional space is provided for student-generated questions.	○	○	○	○	○
Questions are used to check for students' understanding and to engage students in the content.	○	○	○	○	○
Questions connect to prior knowledge, promote curiosity, and connect to out-of-classroom contexts.	○	○	○	○	○

IBI_PT. Please rate your competence in using of performance tasks during instruction.

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
A variety of formative performance tasks provide students feedback on their progress and to check for understanding.	○	○	○	○	○
Formative tasks target argumentation skills and other important disciplinary work within the social studies.	○	○	○	○	○
Argumentation is used as a cornerstone of the students' summative evaluation.	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
Qualities of a good argument (evidentiary, reasoned, accurate, and clear) are identified.	○	○	○	○	○
Feedback is provided to help students build better arguments.	○	○	○	○	○
Opportunities are provided for students to express their understanding through extension tasks or by taking informed action.	○	○	○	○	○
Opportunities are provided for cooperative learning experiences that promote individual accountability.	○	○	○	○	○
Opportunities are provided for cooperative learning experiences that promote group interdependence.	○	○	○	○	○

IBI_S. Please rate your competence in using disciplinary sources during instruction.

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well
A variety of source types are used to engage students (e.g., images, text, video).	○	○	○	○	○
Sources demonstrate multiple perspectives (e.g., inclusion of marginalized perspectives, conflicting evidence on a topic).	○	○	○	○	○
Instructional scaffolds provide support to address learner needs (e.g., sources are adapted, excerpted, annotated, modified).	○	○	○	○	○
Sources help students complete formative and summative tasks in order to answer compelling and supporting questions.	○	○	○	○	○
Sources demonstrate deep knowledge of the subject matter.	○	○	○	○	○

Section II: Social and Emotional Instruction and Competencies (Adapted SASEIC)

SASIEC 1A Preview. Social Interaction Assessment

Part A: Self-assess your implementation of social interactive practices.

Think about how often you implement a variety of practices that influence students' social, emotional, and academic skills. Think about how often you implement teaching practices that focus on positive social interactions including:

1. student centered discipline
2. motivative teacher language
3. student responsibility and choice
4. teacher warmth and support

SASEIC.1A_SCD. Social Interactions: Student Centered Discipline

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I have discussions with my students about how and why classroom procedures are implemented.	○	○	○	○	○
I implement consequences that are logical to the rule that is broken.	○	○	○	○	○
I am consistent in implementing classroom rules and consequences.	○	○	○	○	○
I respond to misbehavior by considering pupil-specific social, affective, cognitive, and/or environmental factors that are associated with occurrence of the behavior.	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I hold class discussions with my students so we can solve class problems.	○	○	○	○	○
I ask my students to reflect and redirect their behavior when they misbehave.	○	○	○	○	○
I teach students strategies to handle the emotions that affect their learning (e.g., stress, frustration).	○	○	○	○	○
I model strategies that will help students to monitor and regulate their behavior.	○	○	○	○	○

SASEIC.1A_TL. Social Interactions: Teacher Language

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I promote positive behaviors by encouraging my students when they display good social skills (e.g., acknowledge positive actions or steps to improve).	○	○	○	○	○
I promote positive behaviors by encouraging my students when they display good work habits (e.g., acknowledge positive actions or steps to improve).	○	○	○	○	○
I let my student know how their effort leads to positive results with specific affirmation.	○	○	○	○	○

SASEIC.1A_RC. Social Interactions: Responsibility and Choice

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I let my students help plan how they are going to learn in developmentally appropriate ways.	○	○	○	○	○
I ask for student input when making decisions about how the classroom will operate in developmentally appropriate ways.	○	○	○	○	○
I give students meaningful choices (with parameters) on what they can work on.	○	○	○	○	○
I make sure students make the connection between their choices and potential consequences.	○	○	○	○	○
I arrange experiences that allow my students to become responsible (e.g., classroom aids or jobs, peer tutoring, specific roles in group work) in developmentally appropriate ways.	○	○	○	○	○

SASEIC.1A_WS. Social Interactions: Warmth and Support

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I demonstrate to each student that I appreciate them as an individual (e.g., appropriate eye-contact, greeting each child by name).	○	○	○	○	○
I use the interests and experiences of my students when teaching.	○	○	○	○	○
I display to my students that I care about how and what they learn.	○	○	○	○	○
I let my students know that it is okay to get answers wrong or think outside of the box (e.g., modeling, praising attempts with "good thinking").	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I check in with my students about academic and nonacademic concerns they might have.	○	○	○	○	○
I follow up with my students when they have a problem or concern.	○	○	○	○	○
I create structures in the classroom where my students feel included and appreciated (e.g., morning meetings, small moments, whole-class share outs).	○	○	○	○	○

SASEIC.1B_Preview.

Social Interaction Assessment

Part B: Self-assess your social and emotional competencies.

Think about your own social and emotional competencies and how those competencies influence your ability to implement social interactive practices, including:

1. student centered discipline
2. motivative teacher language
3. student responsibility and choice
4. teacher warmth and support

SASEIC.1B_SA. Teacher Social and Emotional Competencies: Self-Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am aware of social teaching practices that I need to improve upon and grow professionally.	○	○	○	○
I can effectively implement social teaching practices with my students.	○	○	○	○

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am usually aware of how my emotions, culturally grounded beliefs, and background are precursors to my emotional reactions, and I understand how they impact my social teaching practices with my students.	○	○	○	○
I understand how student responses (positive and negative) affect my emotions and my behaviors during social teaching practices.	○	○	○	○
I am aware of how my cultural beliefs and backgrounds affect my social teaching practices with my students.	○	○	○	○

SASEIC.1B_SMER. Teacher Social and Emotional Competencies: Self-Management/Emotion Regulation

	Strongly Disagree	Disagree	Agree	Strongly Agree
I continuously refine my personal goals about how I will best implement social teaching practices with my students.	○	○	○	○
I effectively use multiple strategies (e.g., breathing techniques and mindfulness) when I have a strong emotional reaction in the classroom (e.g., stress, anger) when implementing social teaching practices.	○	○	○	○
Through the effective management of my emotions (e.g., use of stress reduction techniques) I am better able to implement social teaching practices, use positive approaches to discipline, and develop a positive learning environment that is free from bias and prejudice.	○	○	○	○
I model behaviors (e.g., form guidelines, set boundaries) to help students learn to regulate emotions during social teaching practices.	○	○	○	○

SASEIC.1B_SOCA. Teacher Social and Emotional Competencies: Social Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
To effectively implement positive social teaching practices, I usually understand the perspectives of my students and can pay attention to their emotional cues during classroom interactions.	○	○	○	○
I try to understand why my students are or are not actively participating, and I am usually successful at providing my students the necessary skills to participate in the social teaching practices.	○	○	○	○
I successfully support positive emotions and respond to negative emotions during social teaching practices.	○	○	○	○
I address the commonalities and differences (e.g., racial, ethnic, cultural) that exist among students when I implement the social teaching practices.	○	○	○	○

SASEIC.1B_RSS. Teacher Social and Emotional Competencies: Relationship/Social Skills

	Strongly Disagree	Disagree	Agree	Strongly Agree
I clearly communicate behavioral and academic expectations in a manner that addresses students' individual needs and strengths when implementing social teaching practices.	○	○	○	○
I am comfortable helping my students resolve interpersonal conflicts that come up during social teaching practices, and I have experienced success with this.	○	○	○	○
I use the social teaching practices to help form meaningful relationships with my students and cultivate their SEL skills, and I am usually successful at building meaningful relationships.	○	○	○	○
I use the social teaching practices to help cultivate my students' SEL skills, and I am usually successful at building their SEL skills.	○	○	○	○

SASEIC.1B_RDM. Teacher Social and Emotional Competencies: Responsible Decision Making

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am effective at considering multiple forms of evidence, such as balancing the needs and the behaviors of my entire class, while implementing the social teaching practices.	○	○	○	○
I regularly include my students and/or collaborate with colleagues to solve problems that arise in the classroom related to the social teaching practices.	○	○	○	○
I stay focused and consistent when I implement social teaching practices.	○	○	○	○
When I implement the social teaching practices, I balance students' emotional needs and academic needs.	○	○	○	○

SASEIC.2A Preview. Instructional Interaction Assessment

Part A: Self-assess your implementation of interactive teaching practices.

Think about how often you implement a variety of practices that influence students' social, emotional, and academic skills. Think about how often you implement teaching practices that focus on positive instructional interactions including:

1. cooperative learning
2. classroom discussions
3. self-assessment and self-reflection
4. balanced instruction
5. academic press or challenge
6. competence building

SASEIC.2A_CGL. Instructional Interactions: Cooperative Learning/Group Learning

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I encourage my students to work with other students when they have trouble with an assignment.	○	○	○	○	○
I create learning experiences in which my students depend on each other.	○	○	○	○	○
I create learning experiences in which my students must apply positive social skills to be successful.	○	○	○	○	○
I hold individuals and the group accountable for learning during small-group work.	○	○	○	○	○
I provide opportunities for my students to share their work and receive feedback from each other.	○	○	○	○	○
I provide space to allow my students to collaboratively process how they work together and monitor their progress toward their goal.	○	○	○	○	○
I give students feedback on how they interact with and learn from others during cooperative learning experiences.	○	○	○	○	○

SASEIC.2A_CD. Instructional Interactions: Classroom Discussions

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I help my students identify how to listen (e.g., tracking the speaker, making mental connections).	○	○	○	○	○
I help students learn how to respond to and learn from their peers' contributions during a discussion.	○	○	○	○	○

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	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I help my students learn how to effectively communicate their points of view (e.g., elaborate on their thinking).	○	○	○	○	○
I hold in-depth discussions about content with my students.	○	○	○	○	○
I ask my students to listen to and think about their peers' opinions and whether they agree with them.	○	○	○	○	○

SASEIC.2A_SAR. Instructional Interactions: Self-Assessment and Self-Reflection

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I tell my students the learning goals for each lesson.	○	○	○	○	○
I have my students reflect on their personal academic goals (e.g., make connections to the lesson goals).	○	○	○	○	○
I provide my students strategies to analyze their work (e.g., using performance rubrics, peer reviews).	○	○	○	○	○
I create opportunities for my students to monitor and reflect on their progress toward their learning goals.	○	○	○	○	○
I create opportunities for my students to monitor and reflect on their social learning.	○	○	○	○	○
I help my students develop strategies to make sure they meet their learning goals.	○	○	○	○	○
I provide my students opportunities to reflect on their thinking and learning processes (e.g., using graphic organizers and journals).	○	○	○	○	○
I ask my students to think together to provide feedback on the effectiveness of learning activities (e.g.,	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
debriefing tool, feedback form, simple survey).					

SASEIC.2A_BI. Instructional Interactions: Balanced Instruction

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I use an appropriate balance between providing students opportunities to directly learn new information, as well as actively engage in the material.	○	○	○	○	○
I have my students work on some extended projects that require at least one week to complete.	○	○	○	○	○
I require my students to extend their thinking when they provide basic answers (e.g, ask multiple follow-up questions).	○	○	○	○	○
I use multiple instructional strategies to keep my students engaged in learning.	○	○	○	○	○
I make sure that my activities are not just fun, but represent one of the best ways for students to learn the content.	○	○	○	○	○
I ask students to work on projects (e.g, web pages, skits, or posters) that are meant to be shared with multiple audiences (e.g., parents, community members).	○	○	○	○	○

SASEIC.2A_APE. Instructional Interactions: Academic Press and Expectations

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I give my students more challenging problems when they have mastered easier material.	○	○	○	○	○
I ensure that my students feel responsible for accomplishing or failing to accomplish their academic work.	○	○	○	○	○
I teach my students the connection between effort and results, and I expect my students to put in full effort.	○	○	○	○	○
I give my students work that has more than one right answer and ask them to defend their answers.	○	○	○	○	○
I support my students socially and emotionally while challenging them with new or higher levels of learning.	○	○	○	○	○

SASEIC.2A_CB. Instructional Interactions: Competence Building - Modeling, Practicing, Feedback, and Coaching

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I model and practice new learning with my students before asking them to perform independently.	○	○	○	○	○
I demonstrate a concept using a variety of tools (e.g., modeling, demonstrations, mini-lessons, or texts).	○	○	○	○	○
I conference with my students on ways to make their work better.	○	○	○	○	○
I use multiple strategies with my students until they have figured out how to solve the problem (i.e., graphic organizers, leveled text, checklist, verbal cues).	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I give my students frequent specific feedback to let them know how they are doing in my class (academically and socially).	○	○	○	○	○
I have my students correct their mistakes (academic or social) based on feedback from me or their peers.	○	○	○	○	○
I provide specific feedback that is focused on the academic task at hand.	○	○	○	○	○
I use student misconceptions to guide my instruction without singling the student out.	○	○	○	○	○

SASEIC.2B Preview.

Instructional Interaction Assessment

Part B: Self-assess your social and emotional competency.

Think about your own social and emotional competencies and how those competencies influence your ability to implement the instructional interaction teaching practices including:

1. cooperative learning
2. classroom discussions
3. self-assessment and self-reflection
4. balanced instruction
5. academic press or challenge
6. competence building

SASEIC.2B_SA. Teacher Social and Emotional Competency: Self-Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am aware of instructional teaching practices that I need to improve in order to grow professionally.	○	○	○	○
I can effectively implement instructional teaching practices with my students.	○	○	○	○
I am usually aware of how my emotions, culturally grounded beliefs, and background are precursors to my emotional reactions, and I understand how they impact my instructional teaching practices with my students.	○	○	○	○
I understand how student responses (positive and negative) affect my emotions and my behaviors during instructional teaching practices.	○	○	○	○
I am aware of how my cultural beliefs and background affect my instructional teaching practices with my students.	○	○	○	○

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SASEIC.2B_SMER. Teacher Social and Emotional Competency: Self-Management/Emotion Regulation

	Strongly Disagree	Disagree	Agree	Strongly Agree
I continuously refine my personal goals about how I will best implement instructional teaching practices with my students.	○	○	○	○
I effectively use multiple strategies (e.g., breathing techniques and mindfulness) when I have a strong emotional reaction in the classroom (e.g., stress, anger) when implementing instructional practices.	○	○	○	○
Through the effective management of my emotions (e.g., use of stress reduction techniques), I am better able to implement instructional teaching practices and to develop a positive learning environment that is free from bias and prejudice.	○	○	○	○
I model behaviors (e.g., form guidelines, set boundaries)to help students learn to regulate emotions during instructional practices.	○	○	○	○

SASEIC.2B_SOCA. Teacher Social and Emotional Competency: Social Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
To effectively implement positive instructional teaching practices, I usually understand the perspectives of my students and can pay attention to their emotional cues during classroom interactions.	○	○	○	○
I try to understand why my students are or are not actively participating, and I am usually successful at providing my students the necessary skills to participate in the instructional teaching practices.	○	○	○	○
I successfully support positive emotions and respond to negative emotions during instructional teaching practices.	○	○	○	○
I address the commonalities and differences (e.g., racial, ethnic, cultural) that exist among students when I implement the instructional teaching practices.	○	○	○	○

SASEIC.2B_RSS. Teacher Social and Emotional Competency: Relationship/Social Skills

	Strongly Disagree	Disagree	Agree	Strongly Agree
I clearly communicate behavioral and academic expectations in a manner that addresses students' individual needs and strengths when implementing instructional teaching practices.	○	○	○	○
I am comfortable helping my students resolve interpersonal conflicts that come up during instructional teaching practices, and I have experienced success with this.	○	○	○	○
I use the instructional teaching practices to help form meaningful relationships with my students and cultivate their SEL skills, and I am usually successful at building meaningful relationships.	○	○	○	○

	Strongly Disagree	Disagree	Agree	Strongly Agree
I use the instructional teaching practices to help cultivate my students' SEL skills, and I am usually successful at building their SEL skills.	○	○	○	○

SASEIC.2B_RDM. Teacher Social and Emotional Competency: Responsible Decision Making

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am effective at considering multiple forms of evidence, such as balancing the needs and behaviors of my entire class, while implementing the instructional teaching practices.	○	○	○	○
I regularly include my students and/or collaborate with colleagues to solve problems that arise in the classroom related to the instructional teaching practices.	○	○	○	○
I stay focused and consistent when I implement instructional teaching practices.	○	○	○	○
When I implement the instructional teaching practices, I balance awareness of students' emotional needs and academic needs.	○	○	○	○

Section III: Participant Demographics

Demographics 1. The following section asks a few questions about you, your preparation, and your current role.

Demographics 2 . Which best describes your current role?

- ○ K-12 Teacher
- ○ Administrator or Educational Consultant
- ○ Teacher Preparation
- ○ Other

Demographics 3. Which best describes your level of experience in education.

- ○ Preservice Teacher
- ○ Teacher in years 1-5
- ○ Teacher in years 6-10
- ○ Teacher in years 11+

Demographics 4. Which best describes your licensure area or primary student focus.

- ○ Early Childhood, K-6
- ○ Middle Childhood, 4-9
- ○ Secondary, 7-12
- ○ Post Secondary

Demographics 5. Which best describes your gender.

- ○ Male
- ○ Female
- ○ Non-binary / third gender
- ○ Prefer not to say

Demographics 6 . Which best describes your ethnicity.

- ○ African American
- ○ Asian or Pacific Islander
- ○ Caucasian
- ○ Hispanic/Latinx

Demographics 7. Which best describes your age.

- ○ 20-30
- ○ 31-40
- ○ 41-50
- ○ 50+

Demographics 8. Would you be willing to participate in a follow-up interview regarding your responses.

- ○ Yes
- ○ No

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Informed Consent

APPENDIX B. POST TEST INSTRUMENT

Q1.

Informed Consent:
Inquiry and Social and Emotional Competency (ISEC) Post - IDM Institute Survey

Hello Participant,

INTRODUCTION: My name is Art Lewandowski, and likely similar to you, I am an educator and student of inquiry. For my doctoral study at Bowling Green State University and in collaboration with my Dissertation Chair, Dr. Christy Galletta-Horner, and Dr. John Lee and the Inquiry Design Model (IDM) Institute, I am researching connections between inquiry-based instruction and social and emotional learning. As a participant of the Summer 2022 IDM Institute, I am inviting you to take part in this study by completing the following survey.

PURPOSE: The purpose of this study is to assess C3 inquiry-based instruction as a framework to promote social and emotional competency and instructional practices. This survey will quantify and compare competencies in inquiry-based instruction and social and emotional learning before and after participation in the IDM Institute. It will also assess participants' perceptions of connections between the C3 Inquiry Arc and social and emotional competencies.

PROCEDURE: Should you agree to participate, you will be asked to self-report on questions related to your competency in implementing practices in inquiry-based instruction and social and emotional competencies and teaching practices, as well as

demographics (e.g., race, gender) before and after your participation in the summer 2022 IDM Institute. Your responses will be kept completely confidential. The pre-institute ISEC survey should take 15-20 minutes to complete, and the post-institute survey should take 20-25 minutes to complete. All participants will be entered into a raffle for $25 gift cards to Starbucks after completion of both pre and post IDM Institute surveys. Approximately 15% of participants will win a gift card. *Note: If you close your browser before submission, you may lose all survey progress.

VOLUNTARY NATURE: Participation in this study is completely voluntary, and you have the right to withdraw at any point during the study without explanation or penalty. Your decision to participate or not will have no impact on your relationship with Bowling Green State University.

CONFIDENTIALITY PROTECTION: All response data will be downloaded and stored on the researcher's password protected hard drive. After the pre and post-institute survey data have been matched with a participant code and gift card drawings have been awarded, all identifying data will be destroyed. You should not leave the survey open if you are using a public computer or a computer that others may have access to. You should also clear your browser cache and page history after completing the survey.

RISKS: Risks in this study are no greater than those experienced in everyday life. The primary risk to you is a breach of data. The steps outlined above minimize this risk by making your survey responses anonymous (with no identifying information) as soon as possible.

BENEFITS: This study will benefit future educators and leaders in education who seek professional development opportunities to meet positive academic as well as social and emotional aims for teachers and students. A foundation for professional growth, this study will provide you with an opportunity to reflect on your own competencies and perceptions of inquiry-based instruction and social and emotional learning.

CONTACT INFORMATION: For questions regarding the nature, scope, methods or any other inquiry regarding this study, please contact me at Lewanda@bgsu.edu, or (419) 889-7551; or Dr. Christy Galletta-Horner at Cgallet@bgsu.edu, or (419) 372 -7401. You may also contact the Chair of the Bowling Green State University Institutional Review Board at 419-372-7716 or irb@bgsu.edu if you have any questions about your rights as a participant in this research.

INFORMED CONSENT: I have been informed of the purposes, procedures, risks and benefits of this study. I have had the opportunity to have all of my questions answered and I have been informed that my participation is completely voluntary. I agree to participate in this research.

By clicking the consent button below, you acknowledge:

- Your participation in the study is voluntary.
- You are at least 18 years of age.
- You are aware that you may choose to terminate your participation at any time for any reason.

○ I consent, begin the study

○ I do not consent, I do not wish to participate

Q51. Have you completed both Day 1 and Day 2 of the **IDM Institute** within the last year?

○ Yes, I have completed both days

○ No, I have only completed Day 1

○ No, I have only completed Day 2

○ No, I have not completed either day

Survey Preview

Q31. Thanks for volunteering to take part in this study! This ISEC Survey will guide you through 4 sections:

I. Inquiry-Based Instruction Competency (Adapted from QTS Protocol)
II. Social and Emotional Instruction and Competencies (Adapted from SASEIC)

1. Social Interactions
    - Implementation of Social Interactive Practices
    - Self-Assess Participants' Social and Emotional Competencies
2. Instructional Interactions
    - Implementation of Interactive Instructional Practices
    - Self-Assess Participants' Social and Emotional Competencies

III. Degree of Relation Questions
IV. Demographics

*Please do not close your browser before you are finished as your progress might be lost.

Section I: Inquiry Based Instruction (Adapted QTS)

IBI_Q. Please rate your competence in using questions during instruction.

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
Use of compelling questions to frame and guide instruction.	○	○	○	○	○
Compelling questions are rigorous, relevant and provide students an opportunity to craft evidence-based arguments.	○	○	○	○	○
Building students' knowledge through the use of supporting questions.	○	○	○	○	○
Supporting questions are intentionally sequenced and clearly related to the big ideas within the compelling question.	○	○	○	○	○
Supporting questions are aligned with tasks and sources.	○	○	○	○	○
Instructional space is provided for student-generated questions.	○	○	○	○	○
Questions are used to check for students' understanding and to engage students in the content.	○	○	○	○	○
Questions connect to prior knowledge, promote curiosity, and connect to out-of-classroom contexts.	○	○	○	○	○

IBI_PT. Please rate your competence in using of performance tasks during instruction.

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
A variety of formative performance tasks provide students feedback on their progress and to check for understanding.	○	○	○	○	○
Formative tasks target argumentation skills and other important disciplinary work within the social studies.	○	○	○	○	○
Argumentation is used as a cornerstone of the students' summative evaluation.	○	○	○	○	○
Qualities of a good argument (evidentiary, reasoned, accurate, and clear) are identified.	○	○	○	○	○
Feedback is provided to help students build better arguments.	○	○	○	○	○
Opportunities are provided for students to express their understanding through extension tasks or by taking informed action.	○	○	○	○	○
Opportunities are provided for cooperative learning experiences that promote individual accountability.	○	○	○	○	○
Opportunities are provided for cooperative learning experiences that promote group interdependence.	○	○	○	○	○

IBI_S. Please rate your competence in using disciplinary sources during instruction.

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well
A variety of source types are used to engage students (e.g., images, text, video).	○	○	○	○	○
Sources demonstrate multiple perspectives (e.g., inclusion of marginalized perspectives, conflicting evidence on a topic).	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well
Instructional scaffolds provide support to address learner needs (e.g., sources are adapted, excerpted, annotated, modified).	○	○	○	○	○
Sources help students complete formative and summative tasks in order to answer compelling and supporting questions.	○	○	○	○	○
Sources demonstrate deep knowledge of the subject matter.	○	○	○	○	○

Section II: Social and Emotional Instruction and Competencies (Adapted SASEIC)

SASIEC 1A Preview. Social Interaction Assessment

Part A: Self-assess your implementation of social interactive practices.

Think about how often you implement a variety of practices that influence students' social, emotional, and academic skills. Think about how often you implement teaching practices that focus on positive social interactions including:

1. student centered discipline
2. motivative teacher language
3. student responsibility and choice
4. teacher warmth and support

SASEIC.1A_SCD. Social Interactions: Student Centered Discipline

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I have discussions with my students about how and why classroom procedures are implemented.	○	○	○	○	○
I implement consequences that are logical to the rule that is broken.	○	○	○	○	○
I am consistent in implementing classroom rules and consequences.	○	○	○	○	○
I respond to misbehavior by considering pupil-specific social, affective, cognitive, and/or environmental factors that are associated with occurrence of the behavior.	○	○	○	○	○
I hold class discussions with my students so we can solve class problems.	○	○	○	○	○
I ask my students to reflect and redirect their behavior when they misbehave.	○	○	○	○	○
I teach students strategies to handle the emotions that affect their learning (e.g., stress, frustration).	○	○	○	○	○
I model strategies that will help students to monitor and regulate their behavior.	○	○	○	○	○

SASEIC.1A_TL. Social Interactions: Teacher Language

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I promote positive behaviors by encouraging my students when they display good social skills (e.g., acknowledge positive actions or steps to improve).	○	○	○	○	○
I promote positive behaviors by encouraging my students when they display good work habits (e.g., acknowledge positive actions or steps to improve).	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I let my student know how their effort leads to positive results with specific affirmation.	○	○	○	○	○

SASEIC.1A_RC. Social Interactions: Responsibility and Choice

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I let my students help plan how they are going to learn in developmentally appropriate ways.	○	○	○	○	○
I ask for student input when making decisions about how the classroom will operate in developmentally appropriate ways.	○	○	○	○	○
I give students meaningful choices (with parameters) on what they can work on.	○	○	○	○	○
I make sure students make the connection between their choices and potential consequences.	○	○	○	○	○
I arrange experiences that allow my students to become responsible (e.g., classroom aids or jobs, peer tutoring, specific roles in group work) in developmentally appropriate ways.	○	○	○	○	○

SASEIC.1A_WS. Social Interactions: Warmth and Support

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I demonstrate to each student that I appreciate them as an individual (e.g., appropriate eye-contact,	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
greeting each child by name).					
I use the interests and experiences of my students when teaching.	○	○	○	○	○
I display to my students that I care about how and what they learn.	○	○	○	○	○
I let my students know that it is okay to get answers wrong or think outside of the box (e.g., modeling, praising attempts with "good thinking").	○	○	○	○	○
I check in with my students about academic and nonacademic concerns they might have.	○	○	○	○	○
I follow up with my students when they have a problem or concern.	○	○	○	○	○
I create structures in the classroom where my students feel included and appreciated (e.g., morning meetings, small moments, whole-class share outs).	○	○	○	○	○

SASEIC.1B_Preview.

Social Interaction Assessment

Part B: Self-assess your social and emotional competencies.

Think about your own social and emotional competencies and how those competencies influence your ability to implement social interactive practices, including:

1. student centered discipline
2. motivative teacher language
3. student responsibility and choice
4. teacher warmth and support

SASEIC.1B_SA. Teacher Social and Emotional Competencies: Self-Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am aware of social teaching practices that I need to improve upon and grow professionally.	○	○	○	○
I can effectively implement social teaching practices with my students.	○	○	○	○
I am usually aware of how my emotions, culturally grounded beliefs, and background are precursors to my emotional reactions, and I understand how they impact my social teaching practices with my students.	○	○	○	○
I understand how student responses (positive and negative) affect my emotions and my behaviors during social teaching practices.	○	○	○	○
I am aware of how my cultural beliefs and backgrounds affect my social teaching practices with my students.	○	○	○	○

SASEIC.1B_SMER. Teacher Social and Emotional Competencies: Self-Management/Emotion Regulation

	Strongly Disagree	Disagree	Agree	Strongly Agree
I continuously refine my personal goals about how I will best implement social teaching practices with my students.	○	○	○	○
I effectively use multiple strategies (e.g., breathing techniques and mindfulness) when I have a strong emotional reaction in the classroom (e.g., stress, anger) when implementing social teaching practices.	○	○	○	○
Through the effective management of my emotions (e.g., use of stress reduction techniques) I am better able to implement social teaching practices, use positive approaches to discipline, and develop a positive learning environment that is free from bias and prejudice.	○	○	○	○

	Strongly Disagree	Disagree	Agree	Strongly Agree
I model behaviors (e.g., form guidelines, set boundaries) to help students learn to regulate emotions during social teaching practices.	○	○	○	○

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SASEIC.1B_SOCA. Teacher Social and Emotional Competencies: Social Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
To effectively implement positive social teaching practices, I usually understand the perspectives of my students and can pay attention to their emotional cues during classroom interactions.	○	○	○	○
I try to understand why my students are or are not actively participating, and I am usually successful at providing my students the necessary skills to participate in the social teaching practices.	○	○	○	○
I successfully support positive emotions and respond to negative emotions during social teaching practices.	○	○	○	○
I address the commonalities and differences (e.g., racial, ethnic, cultural) that exist among students when I implement the social teaching practices.	○	○	○	○

SASEIC.1B_RSS. Teacher Social and Emotional Competencies: Relationship/Social Skills

	Strongly Disagree	Disagree	Agree	Strongly Agree
I clearly communicate behavioral and academic expectations in a manner that addresses students' individual needs and strengths when implementing social teaching practices.	○	○	○	○
I am comfortable helping my students resolve interpersonal conflicts that come up during social teaching practices, and I have experienced success with this.	○	○	○	○

	Strongly Disagree	Disagree	Agree	Strongly Agree
I use the social teaching practices to help form meaningful relationships with my students and cultivate their SEL skills, and I am usually successful at building meaningful relationships.	○	○	○	○
I use the social teaching practices to help cultivate my students' SEL skills, and I am usually successful at building their SEL skills.	○	○	○	○

SASEIC.1B_RDM. Teacher Social and Emotional Competencies: Responsible Decision Making

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am effective at considering multiple forms of evidence, such as balancing the needs and the behaviors of my entire class, while implementing the social teaching practices.	○	○	○	○
I regularly include my students and/or collaborate with colleagues to solve problems that arise in the classroom related to the social teaching practices.	○	○	○	○
I stay focused and consistent when I implement social teaching practices.	○	○	○	○
When I implement the social teaching practices, I balance students' emotional needs and academic needs.	○	○	○	○

SASEIC.2A Preview. Instructional Interaction Assessment

Part A: Self-assess your implementation of interactive teaching practices.

Think about how often you implement a variety of practices that influence students' social, emotional, and academic skills. Think about how often you implement teaching practices that focus on positive instructional interactions including:

1. cooperative learning
2. classroom discussions

3. self-assessment and self-reflection
4. balanced instruction
5. academic press or challenge
6. competence building

SASEIC.2A_CGL. Instructional Interactions: Cooperative Learning/Group Learning

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I encourage my students to work with other students when they have trouble with an assignment.	○	○	○	○	○
I create learning experiences in which my students depend on each other.	○	○	○	○	○
I create learning experiences in which my students must apply positive social skills to be successful.	○	○	○	○	○
I hold individuals and the group accountable for learning during small-group work.	○	○	○	○	○
I provide opportunities for my students to share their work and receive feedback from each other.	○	○	○	○	○
I provide space to allow my students to collaboratively process how they work together and monitor their progress toward their goal.	○	○	○	○	○
I give students feedback on how they interact with and learn from others during cooperative learning experiences.	○	○	○	○	○

SASEIC.2A_CD. Instructional Interactions: Classroom Discussions

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	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I help my students identify how to listen (e.g., tracking the speaker, making mental connections).	○	○	○	○	○
I help students learn how to respond to and learn from their peers' contributions during a discussion.	○	○	○	○	○
I help my students learn how to effectively communicate their points of view (e.g., elaborate on their thinking).	○	○	○	○	○
I hold in-depth discussions about content with my students.	○	○	○	○	○
I ask my students to listen to and think about their peers' opinions and whether they agree with them.	○	○	○	○	○

SASEIC.2A_SAR. Instructional Interactions: Self-Assessment and Self-Reflection

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I tell my students the learning goals for each lesson.	○	○	○	○	○
I have my students reflect on their personal academic goals (e.g., make connections to the lesson goals).	○	○	○	○	○
I provide my students strategies to analyze their work (e.g., using performance rubrics, peer reviews).	○	○	○	○	○
I create opportunities for my students to monitor and reflect on their progress toward their learning goals.	○	○	○	○	○
I create opportunities for my students to monitor and reflect on their social learning.	○	○	○	○	○
I help my students develop strategies to make sure they meet their learning goals.	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I provide my students opportunities to reflect on their thinking and learning processes (e.g., using graphic organizers and journals).	○	○	○	○	○
I ask my students to think together to provide feedback on the effectiveness of learning activities (e.g., debriefing tool, feedback form, simple survey).	○	○	○	○	○

SASEIC.2A_BI. Instructional Interactions: Balanced Instruction

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I use an appropriate balance between providing students opportunities to directly learn new information, as well as actively engage in the material.	○	○	○	○	○
I have my students work on some extended projects that require at least one week to complete.	○	○	○	○	○
I require my students to extend their thinking when they provide basic answers (e.g, ask multiple follow-up questions).	○	○	○	○	○
I use multiple instructional strategies to keep my students engaged in learning.	○	○	○	○	○
I make sure that my activities are not just fun, but represent one of the best ways for students to learn the content.	○	○	○	○	○
I ask students to work on projects (e.g, web pages, skits, or posters) that are meant to be shared with multiple audiences (e.g., parents, community members).	○	○	○	○	○

SASEIC.2A_APE. Instructional Interactions: Academic Press and Expectations

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I give my students more challenging problems when they have mastered easier material.	○	○	○	○	○
I ensure that my students feel responsible for accomplishing or failing to accomplish their academic work.	○	○	○	○	○
I teach my students the connection between effort and results, and I expect my students to put in full effort.	○	○	○	○	○
I give my students work that has more than one right answer and ask them to defend their answers.	○	○	○	○	○
I support my students socially and emotionally while challenging them with new or higher levels of learning.	○	○	○	○	○

SASEIC.2A_CB. Instructional Interactions: Competence Building - Modeling, Practicing, Feedback, and Coaching

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
I model and practice new learning with my students before asking them to perform independently.	○	○	○	○	○
I demonstrate a concept using a variety of tools (e.g., modeling, demonstrations, mini-lessons, or texts).	○	○	○	○	○
I conference with my students on ways to make their work better.	○	○	○	○	○
I use multiple strategies with my students until they have figured out how to solve the problem (i.e.,	○	○	○	○	○

	I do not implement this practice.	I struggle to implement this practice.	I implement this practice reasonably well.	I generally implement this practice well.	I implement this practice extremely well.
graphic organizers, leveled text, checklist, verbal cues).					
I give my students frequent specific feedback to let them know how they are doing in my class (academically and socially).	○	○	○	○	○
I have my students correct their mistakes (academic or social) based on feedback from me or their peers.	○	○	○	○	○
I provide specific feedback that is focused on the academic task at hand.	○	○	○	○	○
I use student misconceptions to guide my instruction without singling the student out.	○	○	○	○	○

SASEIC.2B Preview.

Instructional Interaction Assessment

Part B: Self-assess your social and emotional competency.

Think about your own social and emotional competencies and how those competencies influence your ability to implement the instructional interaction teaching practices including:

1. cooperative learning
2. classroom discussions
3. self-assessment and self-reflection
4. balanced instruction
5. academic press or challenge
6. competence building

SASEIC.2B_SA. Teacher Social and Emotional Competency: Self-Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am aware of instructional teaching practices that I need to improve in order to grow professionally.	○	○	○	○
I can effectively implement instructional teaching practices with my students.	○	○	○	○
I am usually aware of how my emotions, culturally grounded beliefs, and background are precursors to my emotional reactions, and I understand how they impact my instructional teaching practices with my students.	○	○	○	○
I understand how student responses (positive and negative) affect my emotions and my behaviors during instructional teaching practices.	○	○	○	○
I am aware of how my cultural beliefs and background affect my instructional teaching practices with my students.	○	○	○	○

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SASEIC.2B_SMER. Teacher Social and Emotional Competency: Self-Management/Emotion Regulation

	Strongly Disagree	Disagree	Agree	Strongly Agree
I continuously refine my personal goals about how I will best implement instructional teaching practices with my students.	○	○	○	○
I effectively use multiple strategies (e.g., breathing techniques and mindfulness) when I have a strong emotional reaction in the classroom (e.g., stress, anger) when implementing instructional practices.	○	○	○	○
Through the effective management of my emotions (e.g., use of stress reduction techniques), I am better able to implement instructional teaching practices and to develop a positive learning environment that is free from bias and prejudice.	○	○	○	○
I model behaviors (e.g., form guidelines, set boundaries)to help students learn to regulate emotions during instructional practices.	○	○	○	○

SASEIC.2B_SOCA. Teacher Social and Emotional Competency: Social Awareness

	Strongly Disagree	Disagree	Agree	Strongly Agree
To effectively implement positive instructional teaching practices, I usually understand the perspectives of my students and can pay attention to their emotional cues during classroom interactions.	○	○	○	○
I try to understand why my students are or are not actively participating, and I am usually successful at providing my students the necessary skills to participate in the instructional teaching practices.	○	○	○	○
I successfully support positive emotions and respond to negative emotions during instructional teaching practices.	○	○	○	○
I address the commonalities and differences (e.g., racial, ethnic, cultural) that exist among students when I implement the instructional teaching practices.	○	○	○	○

SASEIC.2B_RSS. Teacher Social and Emotional Competency: Relationship/Social Skills

	Strongly Disagree	Disagree	Agree	Strongly Agree
I clearly communicate behavioral and academic expectations in a manner that addresses students' individual needs and strengths when implementing instructional teaching practices.	○	○	○	○
I am comfortable helping my students resolve interpersonal conflicts that come up during instructional teaching practices, and I have experienced success with this.	○	○	○	○
I use the instructional teaching practices to help form meaningful relationships with my students and cultivate their SEL skills, and I am usually successful at building meaningful relationships.	○	○	○	○

	Strongly Disagree	Disagree	Agree	Strongly Agree
I use the instructional teaching practices to help cultivate my students' SEL skills, and I am usually successful at building their SEL skills.	○	○	○	○

SASEIC.2B_RDM. Teacher Social and Emotional Competency: Responsible Decision Making

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am effective at considering multiple forms of evidence, such as balancing the needs and behaviors of my entire class, while implementing the instructional teaching practices.	○	○	○	○
I regularly include my students and/or collaborate with colleagues to solve problems that arise in the classroom related to the instructional teaching practices.	○	○	○	○
I stay focused and consistent when I implement instructional teaching practices.	○	○	○	○
When I implement the instructional teaching practices, I balance awareness of students' emotional needs and academic needs.	○	○	○	○

Section III: Inquiry and SEL Constructed Response

IBI and SEL Preview. For the following four questions, you will be asked about your perceptions regarding any connections between the four dimensions of C3 Inquiry based instruction and the five identified social and emotional competencies.

D1 and SEC. How do you associate **developing questions and planning inquiries** (C3 Dimension 1) with the five social and emotional competencies?

	Competency is not applicable to D1	Competency is utilized in D1	Competency is promoted in D1
self-awareness:	○	○	○
self-management:	○	○	○
social awareness:	○	○	○
relationship skills:	○	○	○
responsible decision-making skills:	○	○	○

D2 and SEC. How do you associate **applying social studies disciplinary concepts and tools** (C3 Dimension 2) with the five social and emotional competencies?

	Competency is not applicable to D2	Competency is utilized in D2	Competency is promoted in D2
self-awareness:	○	○	○
self-management:	○	○	○
social awareness:	○	○	○
relationship skills:	○	○	○
responsible decision-making skills:	○	○	○

D3 and SEC.

How do you associate **evaluating sources and using evidence** (C3 Dimension 3) with the five social and emotional competencies?

	Competency is not applicable to D3	Competency is utilized in D3	Competency is promoted in D3
self-awareness:	○	○	○
self-management:	○	○	○

	Competency is not applicable to D3	Competency is utilized in D3	Competency is promoted in D3
social awareness:	○	○	○
relationship skills:	○	○	○
responsible decision-making skills:	○	○	○

D4 and SEC.

How do you associate **communicating conclusions and taking informed action** (C3 Dimension 4) with the five social and emotional competencies?

	Competency is not applicable to D4	Competency is utilized in D4	Competency is promoted in D4
self-awareness:	○	○	○
self-management:	○	○	○
social awareness:	○	○	○
relationship skills:	○	○	○
responsible decision-making skills:	○	○	○

Section IV: Participant Demographics

Demographics 1. The following section asks a few questions about you, your preparation, and your current role.

Demographics 2 . Which best describes your current role?

- ○ K-12 Teacher
- ○ Administrator or Educational Consultant
- ○ Teacher Preparation

- Other

Demographics 3. Which best describes your level of experience in education.

- Preservice Teacher
- Teacher in years 1-5
- Teacher in years 6-10
- Teacher in years 11+

Demographics 4. Which best describes your licensure area or primary student focus.

- Early Childhood, K-6
- Middle Childhood, 4-9
- Secondary, 7-12
- Post Secondary

Demographics 5. Which best describes your gender.

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Demographics 6 . Which best describes your ethnicity.

- African American
- Asian or Pacific Islander
- Caucasian
- Hispanic/Latinx

Demographics 7. Which best describes your age.

- ○ 20-30
- ○ 31-40
- ○ 41-50
- ○ 50+

Demographics 8. Would you be willing to participate in a follow-up interview regarding your responses.

- ○ Yes
- ○ No

Q54. Would you like me to contact you with study results and resources for infusion of SEL into instructional practices.

- ○ Yes
- ○ No

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