On-site, Ongoing, and Individualized Professional Development: A Case Study at Rural Charter School

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A Case Study at Rural Charter School

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Dedication

“Be on your guard; stand firm in the faith; be courageous; be strong.”

-1 Corinthians 16:13

Without my faith in Christ, I am certain I would not be where I am today. The continued support and drive that my Lord and Savior has given me has led me to this point in my life. I dedicate this dissertation to my amazing husband, Jon and my two precious children, Jon Harris and Annie. These three have supported me emotionally and spiritually throughout this entire process. The love and patience you have shown has not gone unnoticed. In our twelve years of marriage, Jon has graciously supported me through three degrees and countless hours of school work. The time he has dedicated to stepping up for our family during this process is priceless. To my children- mommy LOVES you very much and we have all longed for the day my time and energy can be devoted back to you. My only hope is that throughout this you both have seen what hard work and dedication can do for you. You two will go so far in life. To my parents- THANK YOU. You have provided continuous encouragement and support. Thank you for challenging me to never settle. To my in-laws, thank you for always stepping in and helping out. Jon, the kids, and I are truly blessed.
Abstract

The current model of mass professional development for all teachers does not address the individual needs of each teacher (Berckenmeyer, 2014; Darling-Hammond et al., 2009; DeMonte, 2013). This case study research focused on reaching a deeper understanding of an on-site, ongoing, individualized professional development innovation implemented at Rural Charter School for eight primary teachers as they began to apply a new instructional model; the integration of English-Language Arts standards into the science, social studies, and mathematics. My role within the study fluctuated between that of the researcher, an informant, and a teacher leader in delivering the personalized professional development.

Two research questions guided this study: 1. What were the benefits (if any) of implementing on-site, ongoing, and individualized professional development programs to sustain change? and; 2. How did on-site, ongoing, and individualized professional development impact teachers’ daily practice? The benefits of on-site, ongoing, and individualized professional development included an individualized plan of support; relevant resources for current curriculum; continuous communication, support, and feedback; and on site collaboration with researchers and team members. Three impacts on daily practice were also noted. Finally a bottom up model for on-site, ongoing, and individualized professional development is presented.
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CHAPTER 1

INTRODUCTION

Teachers and school leaders are challenged daily with the implementation of new innovative practices to enhance teaching and student learning. Frequently professional development opportunities are provided to teachers as innovations are implemented. While evaluating the professional development provided to teachers to address possible gaps, leaders must take into account the personal strengths and weaknesses of each teacher (Darling-Hammond, Wei, Powers, & Killion, 2009). A possible path in addressing an individual teacher’s strengths and weaknesses can be found in personalized professional development (e.g., Schifter, 2016). Schifter (2016) recognized that personalized professional development requires multiple methods of delivery, the development of skills and knowledge, and must relate to personal strengths and weaknesses of each participant.

Just as teachers may be challenged to meet the needs of each student through differentiation, school leaders may be challenged to provide differentiation for teachers through professional development. My role as a teacher leader during the time period of this case study research was to support the development and implementation of an individualized plan of professional development. This method allowed my school to implement on-site, ongoing, and individualized professional development (PD) for primary teachers as they began to apply a new instructional model. This model consisted of the integration of English-Language Arts standards into the science, social studies, and mathematics 2nd-grade curricula. However, my role as a researcher during the time period of my study was to reach and document a deeper understanding of the benefits (if any) of on-site, ongoing, and individualized professional development and possible impacts the innovation had on the daily practices of teachers.
This qualitative study followed a case study research tradition (Stake, 1995). Merriam (1998) defined a case study as being “a thing, a single entity, a unit around which there are boundaries” (p. 27). This case then was the on-site, ongoing, and individualized professional development innovation at Rural Charter School (RCS). The case was unique to the setting and context surrounding the school. This case study focused on developing an in-depth description and analysis of the process of implementing an innovation based on on-site, ongoing, and individualized professional development. A set of data gathering methods such as scales and interviews were administered. They helped in gaining a rich understanding of the process experienced by teachers when participating in the aforementioned innovative professional development process. Moreover, the Teacher Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001) was also employed with the aim of measuring teacher’s individual perception of his or her ability to bring about a desired outcome during the implemented innovation. The results of the scale helped enrich the stories of each participating teacher. The data gathered were initially analyzed following an open coding strategy. The initial themes were then analyzed following a selective coding strategy that identified roadblocks and allowed modification of professional development.

My role within the study fluctuated between that of the researcher, an informant, and a teacher leader in delivering the personalized professional development. As a member of the school’s administrative team, my involvement with the study allowed me to have these multiple perspectives. Although this interpretive research allowed the teacher participants to tell their story, as their stories unfolded, they provided the information needed for me to offer individualized support to each participant.
Rationale Behind the Initiative

Accountability measures across the United States have generally placed more weight on English Language Arts and mathematics and have reduced science and social studies to a minor portion of the accountability equation (Walker, 2014). Yet Camins (2017), quoted Dean Pearson at UC Berkeley as follows:

We’d all be better off if schools taught reading as a tool to support learning those big ideas found in science and social studies instruction, transforming reading instruction from its current role as the curricular ‘bully’ in our schools into a role it is better suited to play as a curricular “buddy.” (para. 1)

Within my school, this reduction became a concern for the leaders and administration that saw value and depth within these curricula areas (i.e., science, mathematics, social studies).

In order to address this concern an instructional approach to content integration was developed. This approach aimed at helping teachers to maximize the instructional time for all core contents. As teachers transitioned to this new instructional model, focused support was needed for teacher development. As a teacher leader and member of the administrative team at the research site, my job was to provide support for each teacher as the new instructional model unfolded.

Context of the Study

My Setting

The study was conducted in Rural Charter School (RCS). RCS is a charter school located in an agricultural county in the southeastern United States. RCS believes that all students can learn, sets high expectations for all, supports real world experiences, and promotes a passion for learning. RCS has been in existence since 2007 and began with fewer than twenty students in
kindergarten. Since that inaugural group, RCS has grown significantly and maintained a rating of school of excellence. In 2016, RCS served over 900 students in kindergarten through the eleventh grade. The administrative team consisted of seven members, four of whom were classroom teachers. In 2016, with the aim of allowing the voice of teachers to be at the forefront of all administrative decision making, the school decided to include classroom teachers as members of the administrative team.

RCS has continued to embrace the idea of preparing elementary students to be successful middle school students, equip middle school students to embrace high school, and ultimately equipping high school students to be productive citizens. RCS has the unique privilege of seeing students complete their entire educational journey within one campus. Leaders and administrators across the school plan with the final product in mind. RCS’s ultimate goal is to graduate productive members of society.

The study was purposefully situated within a small group of eight participants at the research site. The individualized plan of professional development was completed over the course of a four-month period during the implementation of content integration within the 2nd-grade team. The implementation of content integration stemmed from the reduction in time allotted to science and social studies curricula. In order to address content integration, RCS developed a new instructional model within the 2nd-grade team.

The New Instructional Model: The HUB System

In a national study conducted by Farkas Duffing Research Group in 2011, over 1000 teachers across grades 3rd-12th reported on the narrowing curriculum due to increased time allotted to English Language Arts (ELA) and mathematics. Two-thirds of the teachers reported “other subjects” were cut in order to increase time in ELA and mathematics. Of the teachers
pollled, 36% reported losing time in social studies, and 27% reported losing time in science (Walker, 2014). At the local level, RCS’s administrative team began to document decreased time spent in science and social studies instruction across the campus. In order to secure and sustain the importance of these subject areas, the development of the “HUB” system began within our 2nd-grade team.

The HUB system consisted of four primary HUBs that each focused on a core content area:

1. Science/ELA HUB
2. Social Studies/ELA HUB
3. Mathematics HUB
4. Inquiry HUB

Within the science HUB, all science standards were covered in conjunction with the ELA standards. The science curriculum was taught through the lens of a reading teacher. The social studies HUB focused on the reading comprehension standards located within the ELA curriculum. The students were taught using leveled reading material that covered the social studies curriculum, while embedding ELA concepts such as main idea, supporting details, summarizing, and inferring. The mathematics HUB continuously evolved as teachers implemented content integration. The mathematics HUB began to infuse more real world applications that embed reading, but the reality was that not all mathematics was relatable to the science and social studies curricula. Finally, the inquiry HUB supported and enhanced all content areas. For example in the inquiry HUB, research projects were completed on historical figures (social studies integration) or simple machines (science integration) with the infusion of
technology through presentations. A more detailed outline and role of each HUB is expounded in Chapter Four.

**Problem Statement**

Historically, there has been a lack of differentiation provided for teachers in professional development (Strauss, 2014). The current model of mass professional development for all teachers does not address the individual needs of each teacher (Berckenmeyer, 2014; Darling-Hammond et al., 2009; DeMonte, 2013). DeMonte (2013) highlighted three areas of concern regarding professional development: disconnection from practice; generic and unrelated; infrequent and provided within a one-stop shot. In order to close this gap, administrators and teacher leaders must provide professional development where professional development is needed and appropriately fits (Darling-Hammond et al., 2009; Berckemeyer, 2014). More specifically, in 2013 the National Board Association’s Center for Public Education released a report on professional development, a critical finding showed professional development was ineffective due to the lack of support during the most important stage in the learning process: implementation (Strauss, 2014).

Learning must be ongoing and must be relevant to the individual, and without support, teachers have begun to resist new innovations or changes within educational practices (Katzenmeyer & Moller, 2009). Possible causes for this resistance are lack of support, amount of work, missing external or internal motivation, individual concerns, or a teacher’s lack of beliefs in his or her ability to effectively implement or make a difference through the change process (Bohn, 2014). The implementation and careful analysis of the benefits of on-site, ongoing, individualized professional development could be of help in understanding if this type
of professional development remedies the ineffectiveness of one-size-fits-all professional development for teachers.

**Research Questions**

This research focused on reaching a deeper understanding of an individualized professional development innovation implemented at Rural Charter School. Two research questions guided this study:

1. What were the benefits (if any) of implementing on-site, ongoing, and individualized professional development programs to sustain change?
2. How did on-site, ongoing, and individualized professional development impact teachers’ daily practice?

**Purpose and Significance of the Study**

The study analyzed the potential benefits of on-site, ongoing, and individualized professional development provided to teachers throughout the implementation of content integration. The participants and I worked collaboratively to build a support system to ensure newly gained knowledge had the potential to impact instructional practice. The significance of the study was multipurpose and sought to

- provide a possible solution to the ineffectiveness of mass professional development utilized across educational institutions;
- provide administrators and teacher leaders a model and process for planning individualized professional development based on teacher’s individual needs;
- provide teachers with support throughout the learning process and to allow increased efficiency in the implementation of a new innovation.
Conceptual Framework

Ravitch and Riggan (2017) defined a conceptual framework as “... an argument about why the topic one wishes to study matters, and why the means proposed to study it are appropriate and rigorous” (p. 28). These authors explained the conceptual framework using three central ideas. First, a conceptual framework is a lens or a set of lenses that helps the researcher makes sense of things. Secondly, a conceptual framework is related pieces that build coherence to the research topic. Finally, a conceptual framework is an ongoing framework of ideas.

The conceptual framework for this study consisted of four components (Figure 1.1). The first component, the personal connection of the researcher with the research topic was split into two subcomponents: the researcher’s personal interest and goals and the researcher’s paradigmatic view. The researcher’s role at RCS was as an active member of the administrative team, the upper school special education lead teacher, the school-wide testing coordinator, and co-teacher in upper school mathematics course. The researcher’s passion and beliefs were viewed through a transformative worldview, and provided the drive and force behind beginning the study (Ravitch & Riggan, 2017).
The second component of the conceptual framework is what Ravitch and Riggan (2017) defined as the review of literature. It is informed by two subcomponents: the topical research or previous

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*Figure 1.1. Visual Representation of Conceptual Framework*
studies conducted in the field that help justify the relevance and pertinence of the proposed research topic, and the theoretical frameworks, which help understand the relationship the theories have with the topic of study (Ravitch and Riggan, 2017). The third component of the visual representation of the conceptual framework was the problem statement (already described for the sake of the formal structure of this chapter), which was deeply connected to the gaps identified in related literature within the topical research. Finally, the fourth component of the conceptual framework was composed of the research questions. The research questions helped drive the proposed study while bridging the theoretical justification of the relevance of the proposed study with the case study research tradition implemented.

**Review of Relevant Terms**

**Collective Efficacy.** The perceptions of teachers within a school that as a whole their efforts will have a positive impact on students (Goddard, Hoy, and Hoy, 2000).

**Job-Embedded Professional Development.** Professional development that takes place in the day-to-day teaching profession to ensure that learning is related to the practice (Katzenmeyer and Moller, 2009).

**Learning Communities.** The expansion of professional development to include the entire school (Katzenmeyer and Moller, 2009).

**Personalized Professional Development.** Personalized learning supports and customizes learning for teachers and leaders by identifying their needs and developing activities to meet the needs of individual learners (Bretzmann, Bosch, Gustafson, Currie, Daniels, Conley, & Wilkoff, 2015).

**Professional Development.** A continuum of opportunities to train and engage educators in the latest educational reforms and innovations (Katzenmeyer and Moller, 2009).
**Teacher Self-Efficacy.** The perception that teachers have of their own capabilities as they bring out desired outcomes of student motivation and learning. According to Chang and Engelhard (2015), self-efficacy is beliefs about his or her own capabilities to accomplish a given task.

**Teachers’ Sense of Efficacy Scale (Long-Form).** The TSES was developed in 2001 by Tschannen-Moran and Woolfolk Hoy. Tschannen-Moran and Hoy developed a 24-item scale that can be broken down into three different categories. The scale addressed the following: instructional strategies (8 items), classroom management (8 items), and student engagement (8 items) (McLeod, 2012).

**Theory.** Torraco (1997) defined theory as the following, “A theory simply explains what a phenomenon is and how it works” (p. 115).

**Organization of Dissertation**

Chapter One presented an overall introduction to the study. Throughout Chapter One the researcher’s personal connection and rationale of the study was presented. The problem statement, research questions, and purpose and significance of the study was introduced. An overview of the conceptual framework that shaped the study was provided in Figure 1.1. Chapter Two consists of the summary of research findings and writings that informed the theoretical framework and topical research. Chapter Three presents the methodology and data collection procedures for the study. Individual and collective findings are shared in Chapter Four as they relate to the research questions that guided the study. Finally, in Chapter Five the findings are presented as they related to the literature review, implications for future research, summary of research goals, and limitations of the study.
In Chapter One, the purpose of the study was presented as the development of a deeper understanding of the benefits (if any) of on-site, ongoing, and individualized professional development within a 2nd-grade group of teachers, while implementing a school initiative of content integration. The purpose of Chapter Two is to review the pertinent literature drawn from the topics in the visual representation of the conceptual framework for this study found in Chapter One. Figure 2.1 is a visual representation of the two subcomponents of the conceptual framework: theoretical frameworks and topical research.

![Figure 2.1. Visual representation of the topical research and theoretical frameworks.](image)

The literature review process conducted in this study included searching relevant sources such as published books, peer-reviewed articles, and recently conducted studies/reports on the topic proposed. The online journal search was conducted through the Education Resources Information Center (ERIC), Research Gate, Academia, EBSCO and Google Scholar. The key words and terms that were included in the search were the following: accountability, culture in education, professional development, neoliberalism, neoliberalism and education, one-size-fits-all professional development, history of professional development, models of professional
development, individualized professional development, personalized professional development, adult learning theory, social constructivist theory, teacher resistance to change, teacher self-efficacy, and collective efficacy. The search conducted, for the majority, included articles that were published within the range of 2008-2017; however older literature that included the history and development of theoretical frameworks was included as a foundation.

Initially this review examined the theoretical frameworks of the study, grounded in the educational cultural and economic context that promoted mass professional development. Then since this case study involved adults, the relationships between social constructivist and adult learning theory were examined in more detail. Chapter Two then transitioned into an analysis of the topical research that supported and guided the study. The topical research included were the history and evolution of professional development, traditional models/types professional development, ineffectiveness of “one-size-fits-all PD, and individualization of PD, characteristics of effective PD, purpose of PD, teacher reluctance to change, and how teacher self-efficacy and collective efficacy may affect professional development.

Theoretical Frameworks

As defined by Ravitch and Riggan (2017) one critical component of the literature review is the theoretical framework supporting the selected research topic. A theoretical framework has to do with the way in which a researcher engages with, integrates, and argues from existing, ‘formal’ theories within and across relevant fields (Ravitch & Riggan, 2017). The theoretical frameworks of this study were grounded in multiple theories that help understand the state of professional development. Included are an examination of political/economic culture theory affecting education (neoliberalism) and the theory of learning known as social constructivism.
Social constructivists view adult learning as active and collaborative and acknowledged the vital role of self-efficacy and teacher self-efficacy in supporting change.

**Culture of Education Today**

Based upon the accountability culture in education today, Hursch and Martina (2003) recognized that, “Schools are decreasingly concerned with developing thoughtful informed citizens and more concerned with raising test scores and preparing economically productive employees” (p. 31). Leithwood and Beatty (2008) recognized that this accountability push has teachers and schools reaching for a standard that is both public and demanding. They also acknowledged that the media reports are often overly focused on criticizing schools. Based upon the shift in the accountability measures, schools have begun to allocate their instructional time to those subjects weighted most heavily within the accountability equation. Thus reducing time allotted to non-tested subjects such as: the arts, physical education, science, social studies, and extracurriculars.

In addition to strictly grading schools on these “tested” subjects, the accountability movement began to link a teacher’s effectiveness to student scores (Walker, 2014). Due to the obsession with testing and accountability; administrators, teachers, students, and parents have been on a roller coaster as these educational reforms have passed through classrooms across the nation. Over the past five years, the accountability measure implemented at my Rural Charter School (RCS) has changed several times. The core content areas have shifted from equal components of the accountability measure to a weighted average (placing higher weight on ELA and mathematics). There has been a lack of consistency in the measure and therefore a true comparison of year to year growth for schools cannot be made.
Various authors suggested that the accountability culture in today’s classrooms would ultimately lead to a negative impact on students through teacher burnout. Berryhill, Linney, and Fromewick (2009) stated, “Numerous variables could potentially mediate the relationship between accountability and burnout. Two stand out conceptually and empirically: role conflict and teacher self-efficacy, which is often referred to as teacher efficacy” (p. 2). Berry et al. (2009), continued to discuss that policies, such as the accountability measures in education today, had the potential to cause more harm than good. The argument was that the good is overshadowed by the bad in these policies. Relationships have been established among teacher burnout, teachers leaving low performing schools, and teachers leaving minority schools due to the accountability policy measures (Berry et al., 2009). Leithwood and Beatty (2009) supported the idea that accountability policies have potential to impact a teacher’s self-efficacy.

![Diagram](image)

**Figure 2.2.** Adapted from Leithwood and Beatty (2008) impacts of providing leadership.

Leithwood and Beatty (2008) also discussed their concerns about the implementation process, if a teacher believed them as containing negative consequences, then they are less likely to implement fully. The conclusion throughout their study indicated that the accountability movement exacerbates the problem of teacher retention and teacher burnout (Leithwood & Beatty, 2009). The discussion presented so far can be best framed within the consequences of the application of a businesslike approach in education.
Neoliberalism

A businesslike approach was supported in the neoliberalism ideology. The term *neoliberalism* emerged during the post-Great Depression in the 1930s. The term was defined as, “A ‘new liberalism,’ they argued was required, which would involve a more interventionist role for governments in regulating markets and societies” (Savage, 2017, p. 145). Across the globe countries have seen shifts in educational policy that have included or resulted in

- an increased competition between schools;
- a comparison between schools based upon standardized testing;
- an increase in marketing and client recruitment; and
- a business-like structure (Savage, 2017).

Neoliberalism has been criticized for the following movements within the context of education: obsession with effectivity, effectiveness, and efficiency. The outcome that neoliberalism ideology has imposed on education includes competitive achievement measures, ratings and rankings, materialism, and assessment/measure (van der Walt, 2017). The assessment and testing movement can be seen as a result of the application of neoliberalism philosophy.

Criticism for neoliberalism views were captured through a recent completion of a doctoral dissertation by Bishop (2018). He stated the following:

A major criticism of neoliberal thought in relation to school performance is that such theories express political rather than pedagogical solutions to problems in education. The two main failures of neoliberal's approach to education reside specifically in the notions that children are the "investments" of business, that they are simply to be prepared for the
global workforce, and that these students should have to compete for a credential to prove their worth to such a system (Watkins, 2004). (p.25)

It was also noted that the neoliberal theory was lacking a crucial component in that education is social and requires human interaction (Connell, 2013). In reference to professional development, Mockler (2013) recognized, “Visions of actual quality in education rely on an understanding that as a human and messy business one size never fits all, and this works at cross purposes with the neoliberal desire to catalogue and standardize practice” (p.37). When professional development encompasses a standardized approach, the ability to meet the individual needs of teachers is no longer present or attainable.

**Criticism of the Culture of Education, Neoliberalism and High Stakes Testing**

Competitive testing has shown little positive impact in the classrooms today, and has transitioned into a manner to rank and order schools (Connell, 2013). He stated, “The neoliberal takeover of education has been accompanied by a revival of competitive testing” (p. 106). Teachers are not utilizing these tests to drive instruction, individualize learning for students, or enhance the overall education of their students. For teachers, this market supported a workplace that was insecure. As a result of the neoliberal ideology, the following was reported by Connell (2013):

The most obvious part of this change reflects the intensified testing regime that is so central a part of the neoliberal agenda in education. High-stakes competitive testing produces formidable pressure to teach to the test: narrowing the curriculum to the knowledge and skills being tested, and drilling the specific performance that pupils have to emit during the test. This is a familiar effect of competitive examinations, for instance for entry to university or to selective schools. (p. 107)
Walker (2014) revealed that the true focus of accountability should be on student learning, not solely tied to high stakes testing. Walker (2014) stated that U.S. Education Secretary, Arnie Duncan said that too much testing is “sucking oxygen out of the room” and causing “undue stress”. Connell (2013) recognized that teachers are more likely to teach to the tested subjects and narrow the provided curriculum. Leithwood and Beatty (2008) stated, “Expectations for student achievement have become increasingly ambitious and accountability for reaching such high standards increasingly public and demanding …. Media reports about schools are heavily weighted toward criticism” (p. 32). Due to increases in high-stakes testing and accountability, teachers were required to narrow (cut) curriculum that did not enhance testing. Teachers reported that 30% of their instructional time was focused on test related tasks in preparation for standardized assessments (Walker, 2014).

Through the increase in standardized testing and the rise of the accountability in schools today has caused a change in educational practices. As change occurs, schools are in need of providing teachers with professional development that provides the needed support. As recognized by researchers, adults learn socially and through collaborative situations.

**Social Constructivist Theory**

The Social Constructivist Theory, developed by Lev Vygotsky (1962), stemmed from the development of constructivism by Piaget in 1936. Both theories are similar in their approach to learning and obtaining new knowledge, however Vygotsky added an emphasis on the social component to learning. Social constructivist is defined as the following, “Social constructivism is a theory of knowledge in sociology and communication theory that examines the knowledge and understandings of the world that are developed jointly by individuals” (Amineh and Davatgari Asl, 2015, p. 13). Vygotsky (1978) recognized that cognitive growth first takes place at the
social level and then transitions within the individual. Berkeley’s Teacher and Resource Center (2015) stated, “Cognitivist, such as Piaget and Perry, see knowledge as actively constructed by learners in response to interactions with environmental stimuli” (p. 10). Social constructivist scholars believed that learning was a process (Amineh & Davatgari Asl, 2015). Based upon Vygotsky's theory, “thus, an understanding of human thinking and knowledge depends on an understanding of social experience and the force of the cognitive process derives from the social interaction” (Amineh & Davatgari Asl, 2015, p.14)

Morrison (2014) discussed several characteristics that shaped the understanding of constructivist theories of learning: learning is social and experiential; learning takes place during exploration for adults; and adults learn through collaboration with others and when goals are situated with a problem. Vygotsky supported the belief that learning separated from a social context was nothing more than an accumulation of new information. The ideas and beliefs that learning was social reinforced the pertinence of this study, particularly development of the opportunities to work collaboratively with co-workers, leaders, and administrators to improve instructional practices through content literacy.

Within a classroom, the ideas and beliefs supported through the social constructivist theory took the role of teacher and moved it from expert to facilitator. Students are encouraged and provided an opportunity to become active in their learning. The constructivist and social constructivist theories supported inquiry-based learning promoted by the teacher and expected of the students. Lynch (2016) recognized, “social constructivism teaches that all knowledge develops as a result of social interaction and language use, and is therefore a shared, rather than an individual, experience” (para 3). Professional development required a design that allowed participants to interact with one another rather than completed in an isolated session. Darling-
Hammond, Hyler, Gardner, and Espinoza (2017) addressed that learning must be collaborative, allow teachers to be actively be involved, provide support for teachers, and provide models and experts throughout the process.

One of the outgrowths of social constructivist theory was Bandura's development of self-efficacy (Bandura, 1977). In accordance with the social cognitive theory (Vygotsky, 1978) and self-efficacy beliefs, Bandura explained that these theories rely on human beings and their motivation, self-worth, and accomplishments. Pajares (2009) stated, “Unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties” (para. 2). According to Chang and Engelhard (2015), self-efficacy is his or her beliefs about personal capabilities to accomplish a given task. Self-efficacy has potential to impact education significantly. If teachers did not view themselves or their instruction as worthy or capable, this ultimately impacted their daily practice.

A teacher’s level of self-efficacy does not always remain the same across different settings. Teacher efficacy can depend on the class demographics, subject matter, and overall educational setting (Goddard et al., 2000). Bandura (1977) completed numerous studies on human behavior. In one particular study done at Stanford University, Bandura discussed not only teacher efficacy, but also the ideas behind efficacy expectations. Efficacy expectations were expectations that a person can actually execute the needed behaviors to produce the intended outcome.

Efficacy expectations come from a variety of sources that include the following: performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal. Performance accomplishments or mastery experiences included a teacher’s personal and professional experiences, success rate and sense of failure, mishaps, and on the job encounters.
Teachers have a sense of accomplishment and have experienced success with the intended outcome. Vicarious experiences were those in which teachers saw other teachers perform difficult activities without failure. This gave the teacher observing the behaviors a confidence boost. Verbal persuasion was that in which an individual was encouraged or coached into attempting a given task. Teachers had observed an experience that has brought about student success, therefore, were more comfortable in attempting a particular task. Lastly, emotional arousal was when the teacher’s level of stress and anxiety influence the sense of teacher efficacy. The level of hormones signaled a teacher to take action. On the other hand, teachers may have had a hard time coping with a given experience, placed high expectations on oneself, and establish a sense of fear. Research suggested that these experiences were major influences on efficacy beliefs amongst individuals and teachers. (Bandura, 1977; Silverman & Davis, 2009; Goddard et al., 2000).

**Adult Learning Theory**

Adult learning theory was introduced throughout the United States by Malcolm Knowles in the 1970s. This theory originated from the previous works of Lindeman in the early 1920s (Nixon-Ponder, 1995). Adult learning theory recognized that adults acquire knowledge differently than children. It took into consideration that adults typically have roles and responsibilities to manage, while children are dependent on others (Merriam & Bierma, 2014). As noted, adult learning theory was founded within the social cognitive theory that learning is social and context bound. Adults learned social rules by observing and modeling others (Merriam & Bierman, 2014).

Knowles developed five assumptions regarding adult learners, and suggested how instructors should address these assumptions:
Table 2.1

<table>
<thead>
<tr>
<th>Adult Learning Assumptions</th>
<th>How Instructors Should Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults want to know why they should learn.</td>
<td>Instructors need to help develop an understanding of why a particular case is important, and helps learners understand how this will benefit them as a learner.</td>
</tr>
<tr>
<td>Adults need to take responsibility.</td>
<td>Encourage learners to take ownership in their learning and not revert back to a passive learner. Adults are in charge of their own lives and decisions and are more than capable of taking ownership in their learning.</td>
</tr>
<tr>
<td>Adults bring experience to learning.</td>
<td>Experiences can be positive or negative. Experiences provide both resources and biases.</td>
</tr>
<tr>
<td>Adults are ready to learn when the need arises.</td>
<td>Instructors need to understand some learners do not want to be in the situation they are in. The instructor’s job is to ensure each participate leaves with something.</td>
</tr>
<tr>
<td>Adults are task-oriented.</td>
<td>Adults need learning to be situated within a task, not a subject.</td>
</tr>
</tbody>
</table>


Furthermore, Knowles (1998) defined six core principles relating to adult learning in practice. Adult learners need to have an understanding of the purpose in learning. Adults want to know the why, what, and how before embarking on the journey. As adults mature, the focus of learning shifts from having a dependent personality to becoming a self-direction human. As an adult, our learning comes from the experiences that have shaped us as human being. Adults also develop a readiness for learning and become more driven given a task. Lastly, as a mature adult, we begin to develop a motivation for learning (Knowles. 1998).
These core principles were influenced by external factors that differed among individual learners. Leadership must recognize that each individual and situation differs, based upon subject matter or learning differences. Each learner’s goals and purpose for learning varies, which potentially influenced institutional or societal growth (Knowles et al., 2015). Smith also (1982) outlined six factors that influence adult learning: (a) it is lifelong; (b) it is personal; (c) it changes; (d) human development affects it; (e) experience affects it; and (f) it is intuitive. Theorist believed that adults were motivated to learn when provided with these opportunities.

The awareness of adults as learners is essential for leaders and administrators when providing professional development to teachers. Darling-Hammond et al., (2017) suggested that adults should do the following in reference to professional development:

- Adults should choose their own learning experiences based on interest and needs;
- Adults should use their personal experiences to build upon new learning opportunities (p. 14).

Darling-Hammond et al., (2017) supported the assumptions provided by Knowles that adult learners come to each professional development opportunity with experiences that shape each individual as a unique learner.

According to Katzenmeyer and Moller (2006), “Teacher leaders like to learn; in fact, we could say they are passionate about learning. On the other hand, competitive teachers usually gain satisfaction from sharing their knowledge with other teachers” (p. 132). Teachers have the ability to develop other teachers, and help improve upon “adult” practices in teaching, but the involvement of teachers is essential (Katzenmeyer & Moller, 2009). When planning and establishing effective professional development opportunities for adult learners Diaz-Maggioli (2004) cited Huberman’s (1989) five phases that educators face throughout their career:
1. Exploration and Stabilization—Teachers are concerned with following the rules and plans. A teacher’s main focus is not that of teaching and learning.

2. Commitment—Teacher transition to main focus of student learning and new ideas and practices.

3. Diversification—Teachers begin to question their effectiveness with students.

4. Serenity or Distancing—Teachers move past phase three. Teachers either confirm their commitment to teaching, or transition into administration.

5. Conservation and Regret—Teachers retire!

Teacher leaders and administrators need to have an awareness of the phase in which their participants (teachers) are currently functioning in order to provide appropriate supports. Within the study at Rural Charter School, each teacher entered the study within his or her own phase of their teaching career. As leaders, it was our job to embrace each individual, and provide support and encouragement to increase productivity. As previously mentioned, adults learn differently than children. Teachers have commitments outside the classrooms that ultimately influence our willingness to embrace change with our instructional practices. Accordingly, teacher leaders must have an awareness of how adult learners acquire new knowledge, and plan effectively to implement professional development for teachers. This study was purposefully situated within a small group that allowed teachers to have that opportunity to collaborate. Communication and engagement amongst researchers and participants was open and frequent. Participants made time in their schedules to collaborate with other participants. This model of collaborative learning is shaped by Vygotsky’s social constructivist theory.

Based on the theoretical framework, (Figure 2.1) this review began with neoliberalism theory; education has turned into a businesslike model that promotes a competitive culture. As a
result, the competitive culture of schools caused a rise in testing and accountability. But the need for continued individualized support for teachers has surfaced also. No longer does standardized support work for all. As promoted by Vygotsky’s social constructivist theory (1978), learning is socially situated. In order to fully implement an effective model of on-site, ongoing, and individualized professional development, professional development opportunities must be planned with sound methods and models. Through the topical research portion of the conceptual framework the history and evolution of professional development, methods and concerns with professional development, and best practices within professional development were analyzed.

**Topical Research**

As defined by Ravitch and Riggan (2017) the topical research included previous studies that have been conducted in the field that support the relevance of the research topic and provide an argument to justify the type of study conducted. The topical research helped the researcher shape and frame the study as it related to what research said about the topic of interest. The review of literature highlighted specifically the history of professional development, models of professional development, ineffective and effective methods of professional development, and the overall purpose of professional development. The review also included an overview of how teachers’ self-efficacy and resistance to change potentially impacted teacher practice.

**History and Evolution of Professional Development**

Professional development evolved with the changes in educational reform. Katzenmeyer and Moller (2009) traced this progress. In the 1970s, teachers participated in workshops where a packaged curriculum was presented and teachers were expected to redeliver it to students. Teachers had little input or involvement in their professional development opportunities. However, after participation in the professional development, teachers went back to the
classroom and delivered instruction the way in which they were most comfortable and believed benefited their students the most (Katzenmeyer & Moller, 2009).

Transitioning into the early 1980s, educators participated in expert training. Trainings were provided within schools by an expert who would share their knowledge and begin “fixing” the issue (Katzenmeyer & Moller, 2009). In a parallel stream school reform began to move toward outside consultants coming into the schools to provide organizational development.

Moving into the 1990s, educators began to participate in learning communities. Professional learning communities began the movement in collaborative learning and shifted the focus of professional learning to the improvement of student learning. Although job-embedded professional development was new and allowed individual involvement with their professional learning, one struggle occurred when the professional development opportunities were not connected to teacher practice. When professional development and teacher practice were not connected, there were few changes in teaching and learning (Katzenmeyer & Moller, 2009).

Historically, these methods of professional development have followed the definition and characteristics of traditional professional development.

**Traditional Professional Development**

Traditional forms of professional development were described as implementing:

- top-down decision making;
- “fix it” approach;
- prescribed;
- little or no follow-up;
- one-size-fits all;
- fixed delivery method; and
lacking in follow-up evaluation (Katzenmeyer & Moller, 2006). These traditional methods left teachers disconnected from the delivery of information (workshop, conference, or coach) and the implementation of these practices in their classrooms. According to Nishimura (2014)

Professional development in the form of a one-time event may not sustain or penetrate into the system. With the sit and get traditional approach to professional development, teachers change their practices individually, causing a varied approach that often does not have a ripple effect on the school structure itself. (p. 21)

Knight (2000) interviewed 23 teachers and two administrators on their experience in one particular professional development session. The teachers within the study each brought their own personal perspectives of the benefits of professional development to the session. Knight (2000) identified five commonalities that teachers brought to the sessions: (a) conflict amongst teachers; (b) beliefs that professional development was not practical; (c) feeling overwhelmed by task; (d) discontentment against authority; and (e) anxiety about change. Teachers felt that administrators misunderstood their needs or specific concerns. Professional development was oftentimes reported as not relatable (Knight, 2000).

The traditional approach to professional development failed to provide teachers with the opportunities to practice new skills. Strauss (2014) stated, “The reason traditional professional development is ineffective is that it doesn’t support teachers during the stage of learning with the steepest learning curve: implementation” (p. 1).

Ineffectiveness of “One-Size-Fits-All Professional Development”

Throughout schools across this country, professional development has taken on many different approaches and formats. Darling-Hammond et al. (2009) conducted a survey in 2003-
ON-SITE, ONGOING, AND INDIVIDUALIZED PD

2004, in which 92% of participants reported participating in workshops, conferences, or other trainings over the past 12 months, which was a decline from 95% in 1999-2000. Throughout this survey the following statistics were revealed: 22.4% participated in observational visits, 25.1% participated as a presenter at a conference or training, and 35.5% took a college course related to teaching (Darling-Hammond et al., 2009). The findings revealed that most teachers do participate in some form of professional development each year. Although professional development is not always a choice for teachers to select based on their needs, professional development oftentimes was mandated by administration. One important finding in the survey presented that nearly half of U.S. teachers were dissatisfied with the professional development and the minimal funding provided for teachers to participate in professional development sessions (Darling-Hammond et al., 2009). Moreover, Darling-Hammond et al. (2009) also stated that, “Perhaps due to its brevity, its lack of fit to their needs, or its low quality, most teachers were not enthusiastic about the usefulness of the professional development received” (p. 21).

According to Piontek (2016) the term professional development was used to suggest a weakness or improve upon an innate skill or proficiency. Piontek (2016) recommended the term be changed to professional exposure. A problem with professional development in today’s educational world is homogenization of professional development. Professional development becomes possible when the following were put into place by teachers and schools: (a) everyone commits to student success; (b) participants were ready to learn; (c) situated within collaborative learning opportunities; and (d) recognized that everyone learns differently and at different times (Piontek, 2016).

Two stumbling blocks that Diaz-Maggioli (2004) identified within professional development were the lack of variety in the delivery modes of professional development and the
standardized approach to professional development. Piontek (2016) reinforced, “The main reasons are because they (professional development models) are not ongoing, sustainable and high quality” (para 1). Oftentimes, the organizational component of professional development was missing. The person in charge of setting up the professional development was disconnected, or may not have a clear understanding of the purpose behind the intended professional development (Piontek, 2016). Mass professional development took teachers from schools all over, with different needs, and applied the same “fix” or solution for the group (Piontek, 2016). This approach to professional development did not lend itself to the individual, or the individual need of each participant.

Standardized professional development did not take into consideration where each individual teacher was currently functioning as an educator. Roy (2010) stated, “Just as we differentiate student learning based on needs, we also ought to differentiate learning experiences to meet their varying needs” (p. 3). Roy (2010) stated the following:

An overarching theme in their experience is that professional development is great and at times a complete disaster. Their ultimate judgement depends on whether their professional development experience is relevant to them, their students, and their daily work. (p. 3)

Schools continued to send a representative or two to a local conference, workshop, or lecture where information was presented in a large group fashion. Teachers were then supposed to redeliver the information to their team or school, incorporate this learning into their practice, and change their way of thinking or doing. As an educator, we were aware that this does not always happen. Teachers go back to their classrooms and continue educating their students. Berckenmeyer (2014) declared, “In most cases, the one-time shot-in-the-arm or big lecture on
literacy is not getting to the core of what’s needed. It is not truly changing and influencing the quality of the teaching environment” (p. 2).

Fullan, Hord, and Frank (2015) addressed the ineffectiveness of professional development in its current state, and recognized that most professional development failed to impact student learning and enhance educational practices. Professional development needed to be tailored to the school, the teacher, and the students. “We must cater professional development to the appropriate educational level” (Berckenmeyer, 2014, p. 38). Professional development must be individualized and a perfect fit for that one place. He continued to discuss that educators cannot take high school strategies and force them on elementary school teachers and vice versa. The process must be ongoing and supported. Educators expect true learning from their students, but it did not always happen in an hour or in a one-day workshop. Menster (2014), recognized that the largest challenge for teachers was differentiating for students and the same is true for districts trying to differentiate for their teachers. Within the schools in which Menster oversaw, professional development had shifted from workshops and sessions to professional development that was subject-specific and job-embedded. These methods provided teachers with observations, feedback, support, and coaching. The number one request he received from teachers was “show us.” They wanted a model of what the district were asking and looking for in their classrooms. Lastly, Menster (2014) continued by stating

Moving beyond ‘one size fit all’ professional development is a major undertaking for any school district, but it’s also an essential step. Only when all of our teachers have access to relevant, job-embedded professional development opportunities will we succeed in building a district where all of our teachers—and our students—can become the best they can be. (para. 10)
Although schools continue to invest funds into professional development through workshops, seminars, coaching, and other methods of professional development, the amount that transfers into teaching and learning remains minimal (Diaz-Maggioli, 2004). Roy (2010) supported the ineffectiveness of PD by stating, “Professional development is like going on a blind date—you just don’t know what to expect until you show up” (p. 3). According to Croft, Coggshall, Dolan, Powers and Killion (2010), professional development should begin with the identified needs of the teachers and students within a school.

If professional development was viewed as ineffective in its current state then change is warranted. Masten (2016) suggested that time given to professional development does not have to solely consist of in-service days, full-day works, or a few hours after school. Masten (2016) stated

The time can be spread out through mentoring; coaching; observations; forming small groups, teams, or committees (such as P.L.C.s) in which the methodologies and strategies are implemented, tested, and modified not only to meet the needs of the student population but also the teaching and learning style of the teacher. (para. 16)

Through these methods the individualization of professional development had potential to make an instructional impact on teachers.

Although the intent of educators was to improve student learning, the reality of professional development showed that not all educators are in need of the same professional development. Roy (2010) conversed about the need for differentiation amongst professional learning for teachers. Just as teachers differentiate for students, the need for differentiation for teachers was essential. Differentiation for teachers does not mean offering multiple workshops. Differentiation may be small group learning that gives teachers the opportunity to discuss,
analyze, and evaluate challenges within their own classroom (Roy, 2010). Gabriel (2010) asserted, “I argue that just like effective instruction for students, effective professional development (PD) should be differentiated in order to be responsive to the needs, interests, awareness, and commitment of individual teachers” (p. 86).

**Characteristics of Effective Professional Development**

Due to the overall ineffectiveness of traditional methods of professional development it is essential for PD to be relevant for educators (Roy, 2010). Guskey (2002) recognized that, “Despite the general acceptance of professional development as essential to improvement in education, review of professional development research consistently point out the ineffectiveness of most programs” (p. 381-382). Literature supported there was a gap between the current methods of professional development and the effective practices of professional development outlined by Bretzman et al., (2015); Darling-Hammond et al., (2009); Darling-Hammond et al., (2017); Desimone (2009); Hord and Roussin (2013); and Pontz (2003). Table 2.2 provides an overview of the commonalities amongst these six authors. The shared characteristics are displayed below as they relate to effective professional development practices.
Table 2.2

**Characteristics of Effective PD**

<table>
<thead>
<tr>
<th>Characteristic 1</th>
<th>Characteristic 2</th>
<th>Characteristic 3</th>
<th>Characteristic 4</th>
<th>Characteristic 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embedded within Relevant Content</td>
<td>Collaboratively Focused</td>
<td>Ongoing (Sustained Duration)</td>
<td>Engaging/Motivation</td>
<td>Support</td>
</tr>
</tbody>
</table>

**Unifying Factors for Effective PD (Bretzman et al., 2015)**

- **Research Based Implementation Strategies for Effective PD (Hord & Roussin, 2013)**
  - Provide Relevant Resources
  - Maintain a Shared Vision
  - Active Learning
  - Provide Ongoing Assistance

**Core Features of PD (Desimone, 2009)**

- Content Focused
- Collective Participation
- Duration

**Core Principals for Effective PD (Darling-Hammond et al., 2009)**

- Connected to Practice/Specific Content
- Build a Working Relationship amongst Teachers
- Ongoing
- Coaching & Support

**Principals to Effective PD (Darling-Hammond et al., 2017)**

- Content Focused
- Collaborative/Job-Embedded
- Sustained Duration
- Active Learning
- Coaching & Support

**Characteristics of Effective PD (Pontz, 2003)**

- Contented to Instruction
- Learn from one another
- Not a onetime event
- Active & Engaging
- Provide feedback

**Characteristics of Effective PD (Saaris, 2017)**

- Sufficient Time
- Motivation
Five of the seven authors recognized that effective professional development was connected to a teacher’s current practice. Effective PD was intentionally situated within a teacher’s current practice. Characteristic two was recognized by six of the authors; showing the importance of a collaborative learning environment. This was supported by both the social constructivist theory (Vygotsky, 1978) and the adult learning theory (Knowles, 1998). Six of the seven authors discussed that effective PD was implemented over an extended period of time. Although, not one author defined specific amount of time needed for effective PD, they each recognized that PD should be ongoing and sufficient time provided for implementation. Five of seven participants acknowledged that motivation and encouragement are essential in providing effective PD. Participants need to be actively involved and encouraged throughout the process. Finally, four of the seven authors identified that support is needed. Coaching, observations, and assistance are needed for participants to complete the implementation phase of the professional development being offered. Each author included within Table 2.2 addressed additional characteristics of effective professional development for leaders to recognize within their schools.

Two of Pontz (2003) characteristics are outlined in Table 2.2. Additionally, he continued to describe that effective PD should incorporate clear and precise goals. Goals should be reachable and relevant. Adult learners should be awarded the opportunity of choice in PD and have the opportunity to make connections with background knowledge. Support and guidance should be provided over the duration of the PD for teachers.

Bretzman et al., (2015), referenced in Table 2.2, also related success in schools today to the realization that students need individual instruction that matches their individual needs, and applied this same approach to professional development for teachers. Providing personalized
(individualized) professional development for teachers allowed teachers to gain confidence in their abilities (Bretzman et al., 2015). The authors took the opportunity to review teachers’ perspectives on professional development in which they have participated. They identified stories of the worst professional development and these stories led to the discussion of differentiation for professional development. In addition to the noted characteristics in Table 2.2., the authors included the caveat that leaders should be asking professionals (teachers) if they are willing to share their knowledge with others. This process showed respect for teachers and what they have accomplished throughout their career. Lastly, leaders cannot look at a staff as a whole and provide a whole solution to the staff. According to Bretzman et al., “Let’s provide support and guidance for this process. Instead of engaging in the counterproductive work of forcing a standard or pushing a benchmark on everyone at the same time…” (p. 16).

The concept of individualized professional development recognized that not all teachers will start or end in the same place on any given topic. As a result of the study completed by Hord and Roussin (2013) highlighted in Table 2.2, these authors identified additional characteristics for leaders to recognize. These sound principles were referred by my co-researcher and I as we developed the individualized PD for our participants based upon their own unique needs.

Excluding the characteristics noted in Table 2.2, Hord and Roussin (2013) recognized that leaders must take the time to invest in professional learning. Change cannot occur without effective leadership taking place. Leaders must understand the new concept thoroughly, and able to support learners through this process. The learning opportunities must be ongoing and do not happen in a day or two workshops. Although budgets often limit the amount of resources allocated, budgets must be evaluated to provide needed resources for the implementation process.
Frequently in education, several new programs and initiatives are being pushed down to educators simultaneously. Fullan et al., (2015) suggested prioritizing those plans and trashing the rest. Finally, Hord and Roussin (2013) support that leaders must monitor the progress of their teachers. Change leaders must be there through the implementation process in order to support and provide feedback to ensure that the implementation process has the opportunity to be successful. This founding principal directly relates to Tschannen-Moran’s (2004) work as it relates to teacher efficacy. Change leaders must develop trust with their team and display the following qualities: benevolence, honesty, openness, reliability, and competence (Fullan et al., 2015, p. 34). Fullan et al., (2015) stated, “Students become more effective learners when they are taught by continuously learning teachers and administrators” (p. 36). Mistakes are not meant to be traumatic but opportunities to change and grow. Leaders must engage with their teachers in the learning process and truly create a collaborative learning environment.

When reviewing best practices of professional development Desimone (2009) also focused on a conceptual framework for studying effective professional development for teachers and students. Desimone (2009) recognized that coherent professional development includes two components: 1) consistency with the knowledge and beliefs of the teacher and 2) consistency with the policies of the system and educational reforms, and the professional development provided. These core characteristics had potential to build upon teacher’s background knowledge. These changes in skill and knowledge led to an increase in the perceptions of teachers and their beliefs. Essentially, these core features continued to evolve into changes within the instructional practices of teachers. Ultimately, the changes within the teachers’ practice and skill positively impacted and improved student learning (Desimone, 2009).
In a more recent study completed by Darling-Hammond et al. (2017), the four initial characteristics of effective PD were included, as well as, two additional characteristics. The additional characteristics of effective PD included; modeling and providing feedback to participants. Modeling provided participants with professional development that is delivered through the use of observations, demonstrations, or videos. Participants see the “product” in action. This allowed participants to have a clear “idea” of what is being asked of them. Lastly, feedback and reflection were critical components of effective professional development (Darling-Hammond et al., 2017). These components build in time for reflection to provide input and make changes throughout the implementation phase of professional learning.

Darling-Hammond et al. (2017) reviewed 35 studies that incorporated some or all of the seven effective practices of professional development. Within this review, they found one study on science concepts in which students gained on average 19-22 percentage points, when teachers participated in any professional development opportunities, as compared to 13 points for students whose teachers did not participate. Darling-Hammond et al. (2017) stated, “Professional development that is sustained, offering multiple opportunities for teachers to engage in learning around a single set of concepts or practices, has a greater chance of transforming teaching practices and student learning” (p. 15).

Authors suggested that in order to enhance student learning, teacher learning must be based upon daily practices and designed to build upon a teacher’s specific content and instructional practices (Croft et al., 2010). The authors provided professional development models that align to a teacher’s actual work, and therefore made connection between professional development and practice. Job-embedded professional development is designed to enhance the daily practices of teachers. Croft et al. (2010) outlined 12 models of job-embedded professional
development that leaders, schools, and systems implemented in order to provide teachers with learning opportunities that enhanced and positively impacted their daily practices.

1. **Action Research**—Action research allowed teachers to select an aspect or single component of their teaching and investigate this area of practice. Teachers recorded data, considered theories that shape this practice, which resulted in conclusions that related to their practice.

2. **Case discussions**—Through this method, teachers were not directly involved in the practice. Teachers participated through face-to-face observations or videos. Since the teachers were not in the actual discussion, this allowed teachers to become more critical and analyzed the practice more closely (LeFevre, 2004).

3. **Coaching**—Coaching differs from mentoring. Coaching has a stronger focus on the technical aspects of instruction. A coach can be someone who is still teaching part-time, at the school administrative level, or within the district. The coach’s job was to be a resource that provided ongoing support through observations, demonstrations, and conversations with teachers.

4. **Critical friends group**—These groups allowed teachers to meet and discuss challenges they were facing within their own classrooms. Teachers discussed individual student concerns or concerns with lesson plans and assessments.

5. **Data team/assessment development**—These groups analyzed the results of student data from either standardized test or classroom-based assessments. Data teams allowed the educators the opportunity to utilize assessments to inform teaching and learning.
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6. Examining student work/tuning protocol—This method allowed educators the opportunity to identify common misunderstandings amongst students, address misconceptions, and evaluate their own teaching practices.

7. Implementing Individual Growth/Learning Plans—This method was completed alongside an administrator or a group of master teachers. The teacher would develop his or her own group plan and track his or her individual growth.

8. Lesson Study—Teachers prepared a lesson to demonstrate while other teachers observe and document. Later a discussion was held to reveal the strengths and needed improvements of the lesson.

9. Mentoring—School leaders provided teachers a mentor from the same grade level or content area. Teachers were provided with common planning time that allowed for collaboration and support from their mentor teacher.

10. Portfolios—Teachers assemble lesson plans, student work, and other materials from their classrooms. These documents were used to track teacher development over the course of time.

11. Professional Learning Communities—Teachers collaborated to analyze their practice and discuss strengths and tactics utilized to improve student learning.

12. Study Group—Schools generated topics for study that were related to the school improvement goals.

These methods provided by Croft et al. (2010), consisted of twelve effective ways in which to implement professional development within a school. These job-embedded professional development methods were ways in which schools and leaders have transitioned from previously implemented traditional professional development.
In addition, Nishimura (2014) presented four characteristics for the implementation of effective PD. First, professional development must be individualized and school-based. School-based development allowed teachers to research and study concepts that are applicable to their classrooms, schools, and students. Second, professional development utilized coaching and follow-up procedures. These informal follow-up sessions allowed the “coach” and participant to brainstorm ideas, and generate new learning opportunities for further use in the classroom. Third, professional development should be collaborative. Fullan (2007) suggested that teachers were the primary force behind change within schools. Collaboration between teachers, leaders, and students allowed for change to transpire in classrooms. Finally, professional development must be embedded into daily practice and the lives of teachers. Allowing professional development to be real and relevant to everyday life as a teacher was key. Teachers find value in professional development that aligns specifically to their “work” in the classrooms. Although professional development has transitioned to a job-embedded practice, the use of one-stop shot sessions continue to be method of choice for schools.

**Purpose of Professional Development**

Over the years the methods of professional development have changed, yet the need to provide learning opportunities for our teachers to improve and build upon instructional practices was still at the forefront of teacher development. Over the past two decades, professional development was founded on the following vision stated by Diaz-Maggioli (2004)

My vision of professional development is grounded in faith in teachers, the institutions they work for, and the power of the broader community of educators around the county and the globe. Effective professional development should be understood as a job-
embedded commitment that teachers make in order to further the purposes of the profession while addressing their own particular needs. (p. 5)

Professional development had to meet individual teacher needs and be based upon the mission and vision of the establishment. The purpose of professional development was to enhance or build upon skills needed for teachers throughout the educational profession. Just like many professions (doctors, lawyers, and nurses), continuing education was a requirement as things change and grow within the given profession. In education, one-third of beginning teachers left the profession within the first three years and nearly 50% left with the first five years (Ingersoll, 2003). Teachers faced challenges within their personal lives, within their schools, and with their students. The purpose of professional development was to provide support for teachers as they continue within this profession. Mizell (2010) recognized the value of professional development that allowed educators the ability to continue strengthening their practice, applied a student focus, and allowed teachers to work collaboratively with their coworkers.

Fullan, Hord, and Frank (2015) emphasized Learning Forward's Standards for Professional Learning—Implementation by stating, “Professional learning that increases educator effectiveness and results for all students applied research on change and sustains support for implementation of professional learning for long-term change” (p. 20). Standardized professional development designed for all educators does not allow for support of learning through the implementation process. Traditionally, one-stop shop professional development lacked teacher support during the implementation phase. Teachers questioned the purpose for professional development and the effectiveness of the modes in which professional development was delivered for the majority. Diaz-Maggioli (2004) stated, “Given their voices are not
generally heeded during professional development, teachers rightly question their investment in programs that were built behind their backs yet are aimed at changing the way they do things” (p. 2). As teachers questioned the modes in which professional development was designed, these insecurities allowed teachers to become resistant to participate in professional development (change) for a variety of reasons differing amongst individuals (Katzenmeyer & Moller, 2009). Due to the inconsistencies of professional development, teachers began to build a stigma towards professional learning.

**Resistance to Change**

Research revealed that the fear of change or unwillingness to change through traditional modes of professional development was impacted a teacher’s willingness to participate in traditional professional development methods (Diaz-Maggioli, 2004). Bohn (2014) discussed four reasons why teachers may resist change within their school or individual practice. First, some lack confidence that their administration will help or understand their concerns. Second, teachers may be self-conscious with their teaching and were comfortable within remaining the same. Third, they preferred traditional methods of professional development. Finally, the individual lacked the desire or motivation to change. In order to promote change within an educational institution, professional development and learning was essential to the effectiveness of a new initiative within an institution. Participants must have a competitive drive and encompass the ability to be a lifelong learner (Kotter, 2012). Individuals must innately have a personal drive for improving themselves, their practices, and their school. Darling-Hammond et al. (2017) stated, “...teachers that are willing to implement professional development practices in the classroom often face hurdles that are beyond their control...” (p. 20). Teachers faced hurdles that consisted of the following:
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- Lack of time allotted to teaching curriculum;
- Mandated curriculum pacing guides;
- Challenges of teaching English Language students without professional development to address student needs;
- Lack of resources;
- Classroom management issues; and
- Engagement of learners who are distracted by life outside of school (Darling-Hammond et al., 2017).

Not only did administrators and teacher leaders have to overcome these obstacles, administrators and teacher leaders were continually facing challenges of how to inspire teachers to evolve within their buildings. Schools were constantly seeking teachers and staff members who were willing to step up and take ownership in their own learning, the learning of others, and the learning of their students (Katzenmeyer & Moller, 2009).

Katzenmeyer and Moller (2009) discussed that there are several factors that influenced educators and their willingness to learn and change. Some teachers refused to accept change or are simply disappointed in the frequency of the change. Some teachers were satisfied with staying status quo, and saw no value in changing something that was working in their classrooms. Schools often saw teachers who are withdrawn and who are often overlooked due to their quietness. Katzenmeyer and Moller (2009) stated, “Teachers’ reluctance to take on leadership roles may stem not from the lack of interest, but from a desire to protect the time they need to balance work and personal responsibilities” (p. 76). Teachers, just like students, have personal obstacles that will ultimately influence their performance in the classroom.
As leaders and administrators, the job of changing the mentality of remaining the same was critical to improve teaching and learning. According to Croft et al. (2010), school leaders have a responsibility of modeling the importance of growth and development. Croft et al. (2010) expounded upon five responsibilities held by school leaders when implementing professional development:

1. Demonstrate the importance of continued learning for all;
2. Build a culture that embraces continued learning as a vital part of their educational duties and practices;
3. Support facility with training opportunities when working with adults;
4. Allot time to teachers to collaborate with on-site and outside resources; and
5. Utilize student data to make informed decisions (Croft et al., 2010).

According to Donaldson (2006), the most important job of a teacher leader was to establish strong relationships with colleagues. Teacher leaders were essential figures within the school building. Teacher leaders, like never before, had the opportunity to promote, encourage, and help lead teachers through changes. Donaldson (2006) stated, “As ‘one of us’ their opinions, proposals, and practices can carry unusual power with colleagues. The relationship holds more value if a teacher’s leadership is informal, the product of his or her naturally earned authority and credibility among peers” (p. 120). A true teacher leader was one who can build those relationships needed to ensure that change and development occur.

Schools and school leaders had a responsibility to establish and provide opportunities for teachers to grow through changes. Providing teachers with effective professional development through the ever evolving world of education was essential to the growth and development of educators. Identifying and implementing effective professional development did not begin solely
occur at the school level. Darling-Hammond et al. (2017) identified four components that were crucial for the system levels in planning effective professional development.

1. Identify the professional development needs of the system;
2. Choose approaches mostly likely to be effective;
3. Implement approaches with fidelity;
4. Assess and track outcome of professional development (Darling-Hammond et al., 2017).

As schools strive to better the educational journey for students, the inability to provide support for teachers undergoing change will ultimately cause continued roadblocks within schools across the nation. The amount of change being placed on educators today has caused teachers to build up a resistance towards change. This resistance to change ultimately prohibited teachers from being lifelong learners, with internal and external motivators needed to make a difference. The cause of resistance amongst teachers varied depending on the teacher. Each teacher entered her classroom with her own personal beliefs, strengths, weaknesses, and insecurities. These beliefs and perceptions—teacher self-efficacy—had potential to impact a teacher’s growth and development.

**Teacher Self-Efficacy and Collective Efficacy**

When trying to become that catalyst for change in instructional practices, leaders must realize that there are several factors that play a part in the ability to promote and encourage change. The goal throughout this research was to implement on-site, ongoing, and individualized professional development for teachers at Rural Charter School that had potential to help leaders plan effective professional development for primary teachers in reference to the integration of science and social studies into the literacy curriculum. In the beginning of this study, one
primary focus was on the preparedness of teachers with the implementation of science and social studies curriculum, infused within the ELA standards. All teachers enter the classroom with a range of beliefs and emotions in regards to their preparedness and confidence within themselves to deliver the content. This confidence level, better known as teacher efficacy, may have a substantial impact on the overall success of the delivery of instruction. Historically, researchers have defined teacher efficacy in a collection of terms. According to Hoy (2000), teacher efficacy was the ability of a teacher to promote student learning. Hoy (2000) went a little deeper into teacher efficacy by breaking efficacy into personal and general efficacy. Personal efficacy related a teacher’s own feeling of confidence about his or her ability to educate students. General efficacy refers to a general understanding and confidence in the power of teaching struggling students. In order to promote student success, educators must first have confidence in their ability to make a difference.

Teacher efficacy has a direct impact on the overall performance within a classroom. Henson (2001) discussed that teacher’s belief in his or her abilities to enhance student learning was critical to the overall success of students. Henson (2001) further discussed how teacher efficacy, not only impacted the level of instruction, but was also linked to the student’s own efficacy and self-motivation. Teachers who have a positive sense of self-efficacy are more likely to obtain and implement the following: innovative strategies, techniques that provide student autonomy, attainable goals, persistence in the face of student failure, willingness to offer assistance to struggling students, and instruction that develops students’ self-perceptions of their academic skills (Silverman & Davis, 2009).

Research completed by Protheroe (2008) revealed that a teacher’s first year, or during their student teaching in other studies, had a significant impact on the development of a teacher’s
self-efficacy. The level of teacher efficacy increased in schools where teachers are encouraged by their leaders and administration to observe one another and ask for help. Ford (2012) stated, “Collective efficacy can have a positive impact on a teacher’s personal efficacy because they will feel supported, open to changes, and respected as educators” (p. 23).

Chang and Engelhard (2015) explained that a lower sense of self-efficacy can have the opposite effect. Lower perceptions of self-efficacy have correlated with high levels of burnout and teacher exhaustion. Lower levels of self-efficacy were also seen in those teachers who have become extremely critical of students or other staff members. These teachers were quick to refer students for special education, or lack ideas or strategies to work with those struggling students. Goddard, Hoy, and Hoy (2000) embraced the idea that if schools want to improve student achievement, they must first raise the levels of collective efficacy amongst their staff.

According to Goddard et al. (2000) collective efficacy was the combination of all perceptions of members involved in a particular task. The higher the sense of collective efficacy was amongst the group of teachers, the greater the impact on overall student achievement. Collective self-efficacy can take on many different shapes and forms. Teachers can be associated with a given task, share the same level of effort and persistence, share same thoughts or ideas, same stress or tolerance levels, or same level of achievement of particular groups (Silverman & Davis, 2009). The idea behind the collective efficacy was that a group of individuals were working towards a common goal and had confidence in one another to achieve that goal.

Goddard et al. (2000) reported major influences to group efficacy. First, in order to build upon collective efficacy, teachers must be well prepared for a given task. Secondly, teacher leaders need assurance that teachers have the skills necessary to promote student learning. Unfortunately, teachers are put into educational situations that they are not comfortable in, or are
not prepared to teach. This goes back to the job of teacher leaders in helping to schedule and plan with teachers to allow them to focus on areas of strength. Finally, the lack of instructional materials and supplies hindered teachers.

Teachers with a higher level of self-efficacy displayed the qualities of enthusiasm, motivation, effort, persistence, and resilience (Chang & Engelhard, 2015). Leaders were constantly seeking those teachers who are persistent and motivated to reach an intended outcome. Therefore, in order to effectively implement change within the delivery of science and social studies content through ELA standards, the researchers should first determine the individual levels of teacher efficacy.

**Conclusion**

The review began with the theories that shaped the study. The review of literature was a critical component to the understanding of the study and the framework it embraced. This review thoroughly evaluated the key components to effective and ineffective practices involving professional development. Research defined multiple methods to implement effective professional development that had potential to provide a model to follow when challenging teachers to embrace and implement any new innovation (Darling-Hammond et al., 2017, Dias-Maggioli, 2009, Katzenmeyer & Moller, 2009).
CHAPTER THREE

METHODOLOGY

The purpose of this qualitative case study was to: (a) help reach a deep understanding of the on-site, ongoing, and individualized professional development offered to primary teachers as they began to apply a new instructional model consisting of the integration of English-Language Arts into the science and social studies curricula.; (b) propose a model based on a set of practical recommendations emerged from the study, to be used by school leaders interested in promoting on-site, ongoing, and individualized professional development at their schools, and as a possible solution to the ineffectiveness of mass professional development. The study was designed following the nine steps proposed by the Hopscotch Model (Jorrín-Abellán, 2016) for the generation of solid and well-informed qualitative research designs. Figure 3.1 provides a visual representation of the steps followed throughout the process.

Figure 3.1. Hopscotch Model (Jorrín-Abellán, 2016) including nine steps to a qualitative study.

The Hopscotch Model was conceived as a "boundary object" (Star & Griesemer, 1989). It aimed at "determining a number of steps that could be followed in the generation of qualitative research designs that are flexible-enough to suit the needs and contextual constraints of
The model proposes the following nine stages when generating research designs: Step 1-Worldview of the researcher; Step 2-Topic and Goals; Step 3-Conceptual framework; Step 4-Research design; Step 5-Research questions; Step 6-Data gathering; Step 7-Data Analysis; Step 8-Trustworthiness and Validity; Step 9-Ethics. The previous steps emerged after the careful study and analysis of seminal works in the field of qualitative research. For more details with regard to the process followed in the creation of Hopscotch, and the rationale behind the proposed steps, see (Jorrín-Abellán, 2016).

**Worldview of the Researcher**

Worldview was defined by Guba (1990) as, “a basic set of beliefs that guide action” (p. 7). That basic set of beliefs is based on the ontological and epistemological assumptions of the researcher. Creswell (2013) identified four main worldviews in qualitative research: Post-positivism, constructivism, pragmatism, and the transformative worldview. From an ontological point of view, post-positivism understands that there was one reality which was knowable within a specific level of probability, while constructivism understands that the nature of reality is multiple and socially constructed. Pragmatism asserts that there was a single reality and that all individuals have their own unique interpretation of reality. Finally, those following a transformative worldview reject cultural relativism and recognize that various versions of reality were based on social positioning.

From an epistemological point of view, post-positivists believe that objectivity is key and that the researcher manipulates and observes in a dispassionate objective manner. Constructivists on the contrary, believe that there should be an interactive link between the researcher and
participants, and that since knowledge is socially and historically situated, it needs to address
issues of power and trust. Pragmatism on its side, understands that relationships in research is
determined by what the researcher deems as appropriate to a particular given study. Finally,
those following a transformative worldview acknowledge that since there is an interactive link
between the researcher and participants, and knowledge was socially and historically situated,
there was a clear need to address issues of power and trust.

These ontological and epistemological assumptions have a direct impact in the
methodology used in a given study. Post-positivism calls for interventionist quantitative studies,
while constructivism prefers qualitative hermeneutical studies, and a pragmatist matches
methods to specific questions and purposes of research by using mixed methods. In the case of
researchers following a transformative worldview, qualitative methods deeply grounded in
critical theories, are the most common ones.

As the researcher, I brought a transformative worldview to the study (Creswell, 2013).
One of my aims when conducting the study was to empower the participants to express their own
individual needs and give a voice to forgotten content amongst primary grades.

Through this study, the reality of the implementation of the on-site, ongoing, and
individualized professional development was unique to each individual within the study. Not
only was it unique to the individual, but Rural Charter Schools was unique in the overall design
and structure of the learning environment. The participants were given an opportunity to be
heard based upon their individual experiences, while addressing the educational concern of a
suppressed content area (science and social studies) in primary education. Personally, my
connection with the participants was horizontal and collaboratively situated, which also aligns
well with the transformative worldview I brought to the study. In the same way participants in
the study collaborated with the aim of learning from each other throughout the implementation of content integration, the study was also designed as a shared opportunity for teachers to collaboratively reflect with the researcher on the process followed.

Goals of Study

Maxwell (2013) explained that anyone can establish research questions that may or may not be worthy of knowing or researching. He cautioned that if goals are not established for a study, the researcher may tend to lose focus or direction. He recommends the definition of three types of goals to focus a study:

● Personal Goals—These are the goals that motivate the researcher. They align with the desires of the researcher to make a change in an existing condition. Personal goals had potential to overlap with the practical goals.

● Practical Goals—These goals are set to help the researcher accomplish something, meet a given need, or obtain a clearer understanding on a given topic. Practical goals identify a phenomena and influences. Practical goals help the researcher meet a goal and prove a process by which events and actions take place, thus allowing the researcher the ability to provide causal explanations.

● Intellectual Goals—These goals help the researcher engage in collaborative actions that help improve an existing practice. Intellectual goals help generate results that are understandable.

As an administrative team member, my personal goal was to build a community of teachers that embraced change throughout the implementation of a new initiative. Through the implementation of the new initiative, support was provided. In addition, our administrative team
viewed their role in this process as leading, guiding, and supporting these changes to ultimately sustain and enhance instructional practices.

As a teacher leader within the school, my practical goal for the study was to effectively plan and implement on-site, ongoing, and individualized professional development for 2nd-grade teachers, based on the lessons learned from the conducted study.

Finally, the intellectual goal of the study was to propose a practical model to help teacher leaders and administrators, both at Rural Charter School and other educational institutions, implement solid on-site, ongoing, and individualized professional development program, as an alternative to one-size-fits-all professional development. This model (see Chapter 5 pp. 186) would allow RCS and others the ability to implement new initiatives that have potential to impact teacher practice and be sustained over time. In addition, allowing administrators to gain an understanding of how on-site, ongoing and individualized professional development was needed to sustain educational initiatives.

With the aim of reflecting upon this new initiative (content integration), I conducted interviews, administered scales, and analyzed professional development sessions in order to determine the individual needs of the participants within the study. Over the course of the study, my role fluctuated between that of the researcher, an informant, and a teacher leader within the research site. Through this qualitative study, my goal as a teacher leader was to give each participant a voice in his or her own learning process, support the implementation of content integration, individually identify their strengths and weaknesses, and foster an atmosphere that had a willingness to seek support and guidance throughout the study. My aspiration was for participants to feel comfortable to reach out to administration for their needs, wants, and desires. My challenge for the administrative team was to get to know their teachers on an individual level.
in order to sustain a new initiative that has potential to impact instructional practices (content integration), and build a culture that no longer feared or resisted change (teacher resistance), but embraced and sought out change to enhance teaching and learning.

**Co-Researcher**

This study was unique in that I had the opportunity to work with a co-researcher. This provided two perspectives to triangulate and ensure the trustworthiness of the study. The co-researcher and I worked together at the research site, Rural Charter School. My co-researcher was the Upper School Director and an active member of our administrative team. She had 21 years of experience and has been the Upper School Director for four years. Throughout the study, the data collected, the analysis of the data, and professional development sessions were conducted collaboratively. The benefit of having two researchers provided us the opportunity to build upon one another's strengths throughout this process.

**Research Questions**

The two research questions driving the case study were:

1. What were the benefits (if any) of implementing on-site, ongoing, and individualized professional development programs to sustain change?
2. How did on-site, ongoing, and individualized professional development impact teachers’ daily practice?

**Research Tradition**

The conducted study followed an interpretive/qualitative general approach to research. Denzin and Lincoln (2000) defined this particular approach to research in the following manner:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices
transform the world. They turn the world into a series of representations, including field
notes, interviews, conversations, photographs, recordings, and memos to the self.... This
means that qualitative researchers study things in their natural settings, attempting to
make sense of or to interpret, phenomena in terms of the meanings people bring to them.
(p. 3)

In addition to the previous definitions, the following set of characteristics that emerged from the
works of Patton (2002), Denzin and Lincoln (1994) and Creswell (2014) summarize the key
aspects defining the particular approach to research:

1. Qualitative research takes on the study of real-world situations as they unfold naturally.
2. Qualitative research is based upon emergent design flexibility. The research avoids being
   locked into one way of doing things. The research is open to adapting and changing as
   needed throughout the research. The research addresses new pathways as they emerge
   throughout the study.
3. Qualitative research applies purposeful sampling. The people, organization, group, or
   communities are chosen to provide rich information on a particular phenomenon.
4. Within qualitative research, the researcher is the key instrument throughout the study.
5. Qualitative research recognizes the biases of the researcher and this should be visible to
   the audience.
6. The products of qualitative research are dense and can become collage-like creations, and
   provide images or visuals to help in understanding and interpreting the results.

   Among the multiple forms of qualitative research (i.e. narrative inquiry, phenomenology,
   ethnography, etc.), I selected case study as the basis for my study (Stake, 1995). Researchers
   vary their definitions and background in reference to case study as an approach to qualitative
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inquiry. Yin (2009) recognized that a case study involves the study of a case within a real life setting. Stake (2005) disputed that case study was not a methodology but a choice of what is being studied. Other researchers (Denzin & Lincoln, 2005; Merriam, 1998; Yin, 2009) viewed case studies as a strategy of inquiry, methodology, or a comprehensive research strategy (Creswell, 2013). Creswell included case study as one of the five main approaches to qualitative research that also included: (a) narrative research; (b) phenomenology; (c) grounded theory; and (d) ethnography. Narrative Inquiry is a form of qualitative research that deals with the analysis of human experience, more specifically it asked individuals to supply stories about their lives and are retold by the researcher in narrative form (Clandinin & Connelly, 2000). Phenomenological studies describe the meaning of the experiences lived by a person or group of individuals regarding a certain concept or phenomenon. Grounded theory offers the possibility for the researcher to generate theory through a systematic process of data collection and analysis. This research tradition assumes that the behaviors that occur naturally in social contexts can be better analyzed from the generation of "bottom-up" theories to explain them. Hammersley and Atkinson (2007) defined ethnography as the study of social interactions, behaviors, and perceptions that occur within social groups, teams, organizations, and communities. Finally, case study is defined as an in-depth account and analysis of a case that incorporates the study of an event, program, activity, or an individual (Creswell, 2010).

Through Creswell’s (2010) comparison of the characteristics of the main five research traditions in qualitative research, it was clear from the very beginning that case study was the one that best fit the nature of my research problem and the context in which my study was conducted.
This research tradition allowed me to conduct a deep analysis of a bounded system in action (MacDonald & Walker, 1975), the on-site, ongoing, and individualized professional development innovation at Rural Charter School, with a limited number of participants.

Yazan (2015) stated that the three most relevant case study approaches in the social sciences have been proposed by Yin (1994), Stake (1994, 1995), and Merriam (1998). These authors developed their own definitions of case study and the characteristics that encompassed each design of a case study. Yin (1994) defined case study as, “An empirical inquiry that investigates a contemporary phenomenon and context, especially when the boundaries between phenomenon and context are not clearly evident” (p. 13). Stake (1994, 1995) viewed case studies as the end product. Finally, Merriam (1998) asserts the main characteristics of a case study revolve around delimiting the object of study, better known as the case. Merriam (1994) based his definition of case study on those of both Stake (1995) stating that a case is an integrated system, and Miles and Huberman’s (1994) idea of a case as “a phenomenon of some sort occurring in a bounded context” (p. 25). According to Merriam (1998) the participants within a case study are chosen by purposeful sampling. Creswell (2013), upon reviewing multiple definitions and characteristics, defined case study as: “A methodology—a type of design in qualitative research that may be an object of study, as well as a product of inquiry (p. 97).

The case study within Rural Charter School closely aligned with the characteristics of Stake’s (1995) proposal of case study. The reasons that drove me to select this particular approach to case studies were:

- Stake proposed his approach to case studies from a constructivist worldview, which aligns more closely with the transformative worldview I have brought to the study, more than that of Yin’s approach which aligns to the positivist worldview.
The definition of case studies defined by Stake was more flexible and better adapted to studies in education than the ones proposed by Yin and Merriam.

Stake also proposed case studies as progressive in focus entities, thus helping the researcher to adapt the research design to the particularities of the case and the unexpected situations that may occur. Yazan (2015) said with this regard the following: Contrary to Yin who suggests a really tight and structured design for case study method, Stake argues for a flexible design which allows researchers to make major changes even after they proceed from design to research.

Stake (1995) proposed a set of key components of a case study, which he defined as the conceptual structure of the case. The elements proposed by Stake are the ones included in the Hopscotch Model visual representation of the case study that are presented below.

The key components of the case study completed at Rural Charter School are represented in Figure 3.2 below. The visual has been generated using the Hopscotch’s Model tool to build visual representations of qualitative research designs (see Hopscotchmodel.com/visual-representation).
Figure 3.2. Visual representation of research design: case study created using the Hopscotch Model (Jorrín-Abellán, 2016).
The case, on-site, ongoing, and individualized professional development innovation at Rural Charter School, was selected by the researcher, due to the personal interest and motivations already described in Chapter One. Stake (1995) classified cases into three subcategories: (1) intrinsic, (2) instrumental, and (3) collective. The case aligns closely with the instrumental case study proposed by Stake (1995). With this regard Grusky (2010) stated:

The intrinsic case is often exploratory in nature, and the researcher is guided by her interest in the case itself rather than in extending theory or generalizing across cases. In an instrumental case study the case itself is secondary to understanding a particular phenomenon. The difference between an intrinsic and instrumental case study is not the case but rather the purpose of the study. (p. 2)

An instrumental case study allowed the researcher to focus on more than the case itself (Creswell, 2013). The purpose of the study was aimed at reaching a deep understanding of the on-site, ongoing, and individualized PD offered to primary teachers as the 2nd-grade teachers implemented content integration. Throughout Chapter Two, the history and models of professional development are explained thoroughly that helped shape and guide the study. The case was unique to the setting and context surrounding RCS and was specifically designed to follow the journey of a small group of teachers over the course of the innovation.

**Participants**

The eight participants in the study were selected through purposeful sampling (Palys, 2008) in order to show different perspectives throughout the process. Purposeful sampling occurs when the “researcher intentionally selects individual and sites to learn or understand the central phenomenon” (Creswell, 2012, p. 206). The participants were a team of 2nd-grade teachers, support staff, and administration. The participants were selected in order to address the
disappearing curriculum within a primary grade and purposefully amongst a group that worked well together as perceived by RCS’s administrative team. Each participant was then assigned a pseudonym to use to maintain confidentiality.

The participants ranged from having two years to twenty-two years of teaching experience. The mean age for the participants was 36 years old. Three of the eight participants have been at Rural Charter School for at least five years, while three of the participants were in their initial year at Rural Charter School. All of the teachers with the exception of one had an advanced degree. The group consisted of one participant with a Bachelor’s Degree in Education, six participants with a Master’s Degree in Education, and one participant with a Specialist Degree in Education.
Table 3.1

*Participant Demographics*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Years in Education</th>
<th>Years at RCS</th>
<th>Degree Level</th>
<th>Areas of Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 1-Melissa</td>
<td>41</td>
<td>19</td>
<td>4</td>
<td>M.Ed.</td>
<td>Early Childhood Special Education</td>
</tr>
<tr>
<td>Participant 2-Lacy</td>
<td>55</td>
<td>22</td>
<td>8</td>
<td>M.Ed.</td>
<td>Early Childhood Instructional Technology Library Media</td>
</tr>
<tr>
<td>Participant 3-Lindy</td>
<td>28</td>
<td>5</td>
<td>5</td>
<td>Ed.S.</td>
<td>Early Childhood Curriculum &amp; Instruction</td>
</tr>
<tr>
<td>Participant 4-Nicole</td>
<td>39</td>
<td>18</td>
<td>5</td>
<td>M.Ed.</td>
<td>Early Childhood</td>
</tr>
<tr>
<td>Participant 5-Amanda</td>
<td>25</td>
<td>2</td>
<td>0</td>
<td>M.Ed.</td>
<td>Special Education Adaptive Special Education Early Childhood</td>
</tr>
<tr>
<td>Participant 6-Hailey</td>
<td>37</td>
<td>15</td>
<td>0</td>
<td>M.Ed.</td>
<td>Early Childhood Educational Leadership</td>
</tr>
<tr>
<td>Participant 7-Katie</td>
<td>25</td>
<td>4</td>
<td>3</td>
<td>B.S.</td>
<td>Early Childhood</td>
</tr>
<tr>
<td>Participant 8-Autumn</td>
<td>34</td>
<td>2</td>
<td>0</td>
<td>M.Ed.</td>
<td>Early Childhood School Counseling</td>
</tr>
</tbody>
</table>

The experience and background of the participants ranged from early childhood, special education, educational leadership, curriculum and instruction, counseling, and instructional technology. The majority of their teaching experience fell within prekindergarten to 3rd-grade classrooms; however, three participants did have experience within 4th-grade through 8th-grade classrooms. All content areas have been taught by all participants.
Setting

Rural Charter School is located in an agricultural county in southeastern United States. RCS is located in a community of a little more than 17,000 total population. The county where RCS is located consisted of three elementary schools, three middle schools, and two high schools. The county had the following demographic makeup—approximately 56.1% Caucasian, 36.2% African American, and 6.17% Hispanic.

The administrative team consisted of a Chief Executive Officer (CEO), Lower School and Upper School Directors, Advanced Placement Coordinator, Academic Advisor, Dean of Students, College and Career Counselor, and Curriculum/Testing Coordinator. Four of the seven listed administrative team members were also classroom teachers, thus allowing the teachers to have a voice in the administrative decision making.

The study took place within the 2nd-grade team of teachers and support staff. The 2nd-grade team consisted of four lead teachers, one teacher assistant, one special education teacher, one lower school (PK-5) media specialist, and one lower school director (PK-5). Table 3.2 provides an overview of each participant and their role throughout the study.

As discussed earlier in Chapter One, the study was implemented within the HUB system in 2nd-grade. The four HUBs consisted of the following: science, social studies, math, and inquiry. The inquiry HUB was specifically designed to support, enhance, and reinforce skills and methods developed within the science and social studies HUB.
Table 3.2

Participants’ Roles within Study

<table>
<thead>
<tr>
<th>Participant</th>
<th>Role Throughout Study</th>
<th>HUB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melissa</td>
<td>Lead Teacher</td>
<td>Science HUB with Integration of ELA</td>
</tr>
<tr>
<td>Lacy</td>
<td>Media Specialist</td>
<td>Media Specialist collaborative support through all HUBS; primary integration with Inquiry Hub.</td>
</tr>
<tr>
<td>Lindy</td>
<td>Lead Teacher</td>
<td>Inquiry Hub</td>
</tr>
<tr>
<td>Nicole</td>
<td>Lower School Direction</td>
<td>Support for HUB integration</td>
</tr>
<tr>
<td>Amanda</td>
<td>Special Education Teacher</td>
<td>Primary Support in Math HUB and Social Studies HUB</td>
</tr>
<tr>
<td>Hailey</td>
<td>Lead Teacher</td>
<td>Social Studies HUB with Integration of ELA</td>
</tr>
<tr>
<td>Katie</td>
<td>Lead Teacher</td>
<td>Math HUB</td>
</tr>
<tr>
<td>Autumn</td>
<td>Teacher Assistant</td>
<td>Primary Support through Math HUB and Social Studies HUB</td>
</tr>
</tbody>
</table>

Data Gathering Methods

The data collected in the case study research included a variety of sources of information. Creswell (2013) defined the benefits of incorporating multiple sources of information in qualitative studies. An in-depth data collection process can incorporate some of the following methods: observations, interviews, audiovisual material, documents, and reports. In this particular study the following data collection methods were used:

- participant scale scores,
- individual participant interviews, and
- e-mails.
Each member of the study was a willing participant (see the consent-Appendix G). My co-researcher and I began the study by providing our participants with an overview of the new initiative/program (content integration). Just as no two students are alike, we also understood that no two teachers were the same either, and throughout the sessions shared with teachers that our intent was to individually meet their needs. In order to provide individualized support, we encouraged them to maintain open and honest communication. At the initial meeting with the teachers, my co-researcher and I gave each participant two scales—Teacher Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001) and Stages of Concern Questionnaire (SoCQ; George, Hall, & Stiegelbauer, 2006)—to complete independently, and asked for them to return the scales within the next week and a half. The use of the TSES, informed my data, and the SoCQ, informed my co-researcher’s data. Below is a timeline of the data collection procedures throughout the study:

Table 3.3

**Timeline of Data Collection Methods**

<table>
<thead>
<tr>
<th>Method</th>
<th>Month 1</th>
<th>Month 2</th>
<th>Month 3</th>
<th>Month 4</th>
<th>Month 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-TSES</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-TSES</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**Teacher Sense of Efficacy Scale (TSES)**

Tschannen-Moran and Hoy (2001) developed the TSES (Appendix B) to measure the perceptions of efficacy for each participant. The initial administration of the TSES was given at the first meeting with the participants. Through the use of TSES, I was able to gauge each
participant’s starting point in reference to her confidence with the implementation of content integration through the HUB system.

The TSES consisted of 24-item scale that can be broken down into three different sub-categories. The scale addressed the following sub-categories: instructional strategies (8 items), classroom management (8 items), and student engagement (8 items) (McLeod, 2012). Data collected from the pre-TSES provided a deeper understanding of the beliefs and capabilities a teacher perceived he or she had in regards to promoting changes within instructional strategies, classroom management, and student engagement.

Each item was scored using a Likert scale that ranged from one to nine. The scale consisted of five anchor labels, indicating a teacher’s confidence in her influence: nothing, very little, some influence, quite a bit, and a great deal. The scores helped to guide the planning process for professional development by individualizing professional development methods based on the participants’ entering sense of self-efficacy in reference to sub-categories. Even though the Teacher’s Sense of Efficacy Scale is considered a reliable and valid instrument as described in later sections, individual scores were not analyzed statistically, but rather used an indicator for data triangulation purposes.
Table 3.4

Descriptives of Pre- and Post-Teacher Sense of Efficacy Scale and Subscale Scores (TSES, Tschannen-Moran & Hoy, 2001)

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>58.63</td>
<td>5.78</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>57.13</td>
<td>3.56</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>60.25</td>
<td>5.60</td>
</tr>
<tr>
<td>Total Scale</td>
<td>176</td>
<td>13.96</td>
</tr>
</tbody>
</table>

Nie, Lau, and Liau (2012) completed a study on the reliability and validity of the TSES. The purpose of their study was to examine the factorial, predictive, convergent, and discriminant validity. The study also addressed the consistency of the reliability of the TSES. When using both the short (12 items) and long (24 items) form in the study, these forms contained good internal consistent reliability (Nie, et al., 2012). In the development of the TSES, which was originally named the Ohio State Teacher Efficacy Scale (OSTES), three studies were completed to ensure the measure was reliable. The results of these studies showed that the measure was both reliable and valid, regardless of the use of the 12-item version or the 24-item version (Tschannen-Moran & Hoy, 2001).

**Interviews**

In order to thoroughly grasp each participant’s journey throughout the study, after the administration of the TSES, two interview sessions followed. The interviews were conducted by both researchers. The interviews consisted of open-ended questions following a flexible interview protocol (Appendix A). The interviews were completed twice during the duration of the study to capture a midpoint and final data collection of each participant.
Throughout the interviews, one researcher took field notes capturing quotes from the participants, as well as audio recordings for later use, in providing codes and themes that surfaced for each participant and the group as a whole. During the interviews the researchers clarified responses and reiterated what the participant stated to ensure the analysis of the interview were authentic. The interviews allowed the participants an open opportunity to voice their concerns, identify their strengths and weaknesses, address areas of concern, and reached out for further assistance from the researchers.

In the final stages of the study, the participants were given a final administration of the TSES. This was used to determine whether addressing a participant's individual needs positively affected her overall sense of self-efficacy. Table 3.5 summarized the data collection and timeline matrix of the study. The description of the intent and use of each data collection methods is described below and the timeline in which this method was used. This table is part of an anticipated data reduction strategy (Miles & Huberman, 1994) I used during the design stage of the study.

Table 3.5

*Data Collection and Timeline Matrix*
<table>
<thead>
<tr>
<th>What do I need to know?</th>
<th>Why do I need to know this?</th>
<th>What kind of data will answer the questions?</th>
<th>Where can I find the data?</th>
<th>Whom do I contact for access?</th>
<th>Timeline for acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning Level of Teacher Efficacy</strong></td>
<td>To determine teacher perceptions of their individual ability to make a difference in the education experience for students.</td>
<td>Mean scores based on the subcategories: -classroom management -instructional strategies -student engagement</td>
<td>Pre-TSES Scale</td>
<td>Participants</td>
<td>Completed prior to beginning PD with teachers</td>
</tr>
<tr>
<td><strong>Ending Level of Teacher Efficacy</strong></td>
<td>To determine if participation in Onsite, Ongoing, and Individualized PD addressing individual concerns caused increased in the individual level of efficacy.</td>
<td>Mean scores based on the subcategories: -classroom management -instructional strategies -student engagement</td>
<td>Post-TSES Scale</td>
<td>Participants</td>
<td>Completed after the participation in the PD with teachers</td>
</tr>
<tr>
<td><strong>Themes</strong></td>
<td>To determine what themes (roadblocks) arise during the study that contribute to the resistance of the change through content integration.</td>
<td>Interview w/ Participants Observations of Participants Small Group PD Meetings with Participants</td>
<td>Coding of interviews using Atlas.ti (Friese, 2014)</td>
<td>Participants</td>
<td>Completed twice during the implementation of the PD with the teachers</td>
</tr>
</tbody>
</table>
Data Analysis

TSES (Tschannen-Moran & Hoy, 2001)

The analysis of the 24-item questionnaire provided information of each participant according to their perceived abilities to influence their students according to the three subcategories of: (a) classroom management; (b) instructional strategies; and (c) student engagement. Each subcategory was aligned to eight questions on the TSES. An unweighted mean was compiled for each subcategory level. Each participant’s results were scored using a Likert scale of one (nothing) to nine (a great deal). An overall unweighted mean and standard deviation was compiled for the entire group TSES scale scores. In addition to the individual participant, a collective mean was compiled for the group as a whole by subcategory level and entirety. There was no significant difference in TSES (Tschannen-Moran & Hoy, 2001) mean scores based on pre ($M = 176.00$, $SD = 13.96$) and post ($M = 178.25$, $SD = 13.07$), $t(7) = -1.28$, $p = 0.12$ administration. This may be due to the participants’ high initial (pre) ratings (i.e., ceiling effect) offering little room for growth. However, each participant scale scores are included as another data point in the analysis.

Interviews

The analysis of the data gathered was analyzed through the usage of Atlas.ti (Friese, 2014), a software especially conceived to aid researchers in open, selective and axial coding of
data. Through the use of Atlas.ti, the interviews were analyzed and coded collaboratively by both researchers. In utilizing Atlas.ti, the researchers gained a deeper understanding of the journey and roadblocks that each participant faced throughout the study.

**Process of Utilizing Atlas.ti**

In order to understand the process followed, it is important to briefly describe the main components of an Atlas.ti project. Every analysis project incorporated primary documents, quotations, codes, and memos. As a visual representation, I choose to then utilize networks to provide a clearer image of the relationships between the primary documents and the quotations. See Table 3.6 below for a description and study usage of each component.
Table 3.6

Components of Atlas.ti

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Usage for Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documents</td>
<td>Represents the data added from the study; can include text, images, audio or videos.</td>
<td>Primary documents consisted of the audio files of the interviews conducted with each participant.</td>
</tr>
<tr>
<td>Quotations</td>
<td>Segment of a document that is interesting or important to the user.</td>
<td>Quotations were highlighted throughout audio files to indicate important quotes provided by the participants throughout the interviews.</td>
</tr>
<tr>
<td>Codes</td>
<td>Codes capture meaning from the data.</td>
<td>Codes were identified by the commonalities throughout all participants’ interviews. These codes were the issues the participants encountered while undergoing the implementation stage of the study.</td>
</tr>
<tr>
<td>Memos</td>
<td>Memos capture the thoughts of the user. These may stand alone.</td>
<td>Memos were my thoughts throughout the analysis of the primary documents. Notes help guide the narrative provided.</td>
</tr>
<tr>
<td>Networks</td>
<td>Visual diagram that allows the user to connect a set of similar elements together.</td>
<td>Networks were formed to provide a visual based upon individual codes and/or individual participants.</td>
</tr>
</tbody>
</table>

To address the organizational components of the analysis project, the primary documents (audio files of interviews) were named according to the participant (reference to Table 3.1 for demographic information) and labeled to signify whether it was the initial interview (a) or the final interview (b). Figure 3.3 shows the primary documents utilized within the study, as well as,
the identified codes. Each participant participated in two interviews, with the exception of participant two.

![Figure 3.3. Primary documents and identified codes.](image)

Collaboratively, both researchers listened to each audio file and identified concerns and areas of growth for each participant based upon comments and personally identified areas of concern following an open coding process. Through the breaking down of core themes throughout the interviews applying axial coding, commonalities amongst the participants were established. Throughout all 15 interviews, seven codes surfaced as identified areas of needed support or areas of noted change. See Figure 3.4 for the visual representation of the codes.
Figure 3.4. Identifying quotations through analysis of audio files.

In order to gain a clear understanding of the participant as an individual, the use of the quotation manager allowed me to interpret the quotations provided by each participant and assign them to the codes these quotations supported. The codes gave the researchers insight for how the participants were responding to on-site, ongoing, and individualized professional development. See Figure 3.5 for a visual representation of the use of the quotation manager that provided an overview of each individual participant. The same data was then presented with the use of Networks in a web to show the individual participant and their overall codes, supported by
At first the interviews were coded per individual participants or by primary document.

This helped me understand their journey while participating in on-site, ongoing, and individualized professional development. The quotations identified continued areas of perceived weakness throughout the implementation of a new initiative, while providing quotations to support change in teacher practice throughout the process. After the quotations were coded individually, the codes were analyzed as a group or across individuals. Through this I was able to
see the issues that the group faced as a whole throughout the journey. These common codes are themes that addressed the concerns, struggles, roadblocks, and successes that the participants faced throughout the study, while undergoing the implementation of content integration. See Figure 3.7 for the visual representation of the codes based upon all participants, supported by the quotations.

Figure 3.7. Visual network of code with supporting quotations.

The use of Atlas.ti allowed me to capture the journey of each participant. With the use of multiple interviews, this allowed my co-researcher and I the opportunity to tailor the professional development sessions to newly gained information about the participants.
Trustworthiness

Guba (1981) proposed four criteria that should be considered by qualitative researchers in pursuit of trustworthiness: credibility, dependability, transferability, and conformability. Merriam (1998) explained that different types of research are based upon various assumptions about the topic or subject being researched. Within a qualitative methodology, the importance of convincing the reader of how procedures were completed with fairness, accuracy, and with fidelity was essential (Merriam, 1998). Within this study, the importance of portraying each participant’s journey through the implementation of a new initiative while undergoing on-site, ongoing, and individualized professional development was top priority.

Credibility

Credibility is a term used in preference to its equivalent of internal validity in quantitative research. Credibility has to do with how congruent are the findings of the study with the reality under analysis. Upon the analysis of the interviews, I proceeded to have the participants read their portion of the data interpretation and narrative to provide member checking. Creswell (2012) stated, “Member checking is a process in which the researcher asks one or more participants in the study to check for accuracy of the account” (p. 259). Participants were asked to review the analyses provided in Chapter Four of the dissertation to validate interpretations. In the use of interviews, informal conversations, and follow-up sessions, these data collection procedures allowed the researcher the opportunity to triangulate the data (Creswell, 2012). Throughout the study, participants were interviewed on two different occasions to allow for snapshots of their experience throughout the process. The use of multiple data gathering methods such as; a scale, multiple interviews, informal conversations/communications, and observations helped triangulate the data.
No observations were used as a measure to evaluate teaching with the research site. Accompanying observations, follow-up sessions were held in order to review notes and extend an opportunity for further clarification if needed, in order to minimize any bias and distortion in data interpretation. In addition to member checking, thick descriptions were provided in reference to the process followed, the setting, the participants, and the methods followed.

**Dependability**

Dependability is used in preference to reliability, its equivalent in quantitative studies. In order to address dependability in qualitative research, the processes were reported in detail, thereby enabling a future researcher to replicate the work, if not necessarily to gain the same results. Thus, the research design may be viewed as a detailed “prototype model”. To ensure dependability, the use of the Hopscotch Model (Jorrín-Abellán, 2016) provided an in-depth methodological description of the steps followed throughout the study. A detailed methodological description allows for the study to be repeated within the research site and other educational institutions. An thick description of the context in which the study is situation was provided, in addition to the uniqueness of the context of the study.

**Transferability**

Transferability is the degree to which the results of the research are applicable to other situations and populations. Even though the study was conducted on a unique and particular setting, some experiential and practical lessons could be applied to other similar settings through a process of naturalistic generalization (Stake, 2005). Naturalistic generalization invites readers to apply ideas from the natural and in-depth depictions presented in case studies to personal contexts. Through the study, rich background data was provided, as well as, a detailed description of the process followed the phenomenon under study, and the questions driving the
study. These strategies would provide vicarious experiences to other researcher’s interested in analyzing similar issues in their own settings.

**Confirmability**

Confirmability has to do with the steps that have been taken by the researcher to help ensure as far as possible that the work’s findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher. The use of Atlas.ti software allowed the collaborative analysis of data by my co-researcher and I which guaranteed that the voices of the informants were heard. Triangulation of data allowed multiple sources to be combined to ensure authenticity of data and removal of biases of both researchers. Through quotations, informal conversations, and e-mail correspondence, steps were taken to ensure the findings are a result of the experiences of the informants and not the preference of the researcher. An in-depth description of the methodological process allowed for integrity of the research. The use of visual representations throughout the findings allow for clarity in the findings.

**Ethics**

Throughout the research, ethics were addressed. The researcher maintained confidentiality and respect for the participants’ opinions and emotions. The study was in the best interest of those involved and the institution addressed in the research. Creswell (2013) addressed the following ethical issues: gaining location approval and participant permission, disclosing intent of study, avoid pressuring participants, respecting research site and limiting distractions, avoid disclosing only positive results, respecting the privacy of participants, maintaining clear communication, and sharing data with participants. All the ethical issues were addressed within the study.
Disclosure and Consent

Participants signed a consent form, stating an agreement to the following: purpose, benefits, procedures, and liability of the study.

Voluntariness

Participation in the study was voluntary and did not extend beyond the normal solicitation of teacher input and opinions in the regular educational setting.

Confidentiality

Pseudonyms were used, and the code sheet will be stored on drive and secured by passcode.

Institutional Review

An application for study was submitted, reviewed, and approved by the Kennesaw State University (KSU) Institutional Review Board (IRB).

Site Permission

Permission was granted by the Rural Charter School Board of Governors for Study#16-344: On-site, Ongoing, and Individualized PD: A Case Study at Rural Charter School once IRB was approved.
CHAPTER 4
DATA ANALYSIS AND FINDINGS

In this chapter the results of the data analysis are presented. Within educational institutions today, concerns have arisen with providing one-size-fits-all professional development for teachers (Berckemeyer, 2014). The concern is one-size does not in actuality fit all. Darling-Hammond et al. (2009) recognized that all teachers have individual areas of strength and weakness they bring into the classroom. This required a shift from providing mass professional development to individualizing professional development. The purpose of this study was to develop a deep understanding of the implementation of an on-site, ongoing, and individualized professional development program to a group of eight participants within 2nd-grade team at Rural Charter School (RCS).

The implementation of on-site, ongoing, and individualized PD within the HUB system at RCS was specifically situated within the 2nd-grade team of teachers. As it was described on page 18, there was a decrease in time allotted to science and social studies. In order to secure and sustain the importance of these subject areas the development of the “HUB” system began within our 2nd-grade team. The teachers at RCS were then charged with shifting their instructional delivery from an isolated classroom to a classroom where content was integrated across subjects.

Designing of the HUBs

Within Rural Charter School, the transition away from the traditional approach to education began as the development of the HUBs surfaced. The development of the HUB system is included here to offer a thick description of the setting in which the study took place thus providing readers with a vicarious experience of the process. The on-site, ongoing, and individualized professional development was provided as teachers implemented content
integration within the HUB design. Originally, our 2nd-grade team was made up of two standalone teachers. They provided instruction in all four content areas. Then the classes transitioned to switching one time, where one teacher taught mathematics/science and the other teacher taught reading/social studies.

As our school grew, the delivery models have changed and adapted to the growth. At the time of the study, the 2nd-grade team consisted of four homerooms. When initial discussions began about the decreased instructional time in particular content areas, the team discussed that each HUB could take one content area, but the idea of taking just one content did not stop there. Instead the team wanted to plan together, share ideas, and create a new learning environment for their students. The team saw value in all content areas, but also appreciated the way all contents could support and enhance one another. The HUB design that follows came from the collaboration of administration, teacher leaders, and a highly creative 2nd-grade team.

Science and ELA HUB

This HUB contained one primary teacher and one support teacher. This HUB was responsible for covering all the science standards provided by the state, and portions of the ELA standards. The ELA standards were broken down by the teachers as to which HUB or HUBs would be responsible for standard mastery. The students saw this HUB as science, but what the students actually were doing was ELA through science content. Vocabulary words were tied to their science content, while an emphasis was placed on identifying correct punctuation through science, and using their science textbook as a reading basal.

Social Studies and ELA HUB

This HUB also contained one primary teacher and one support teacher. This HUB was responsible for covering all the social studies standards provided by the state and portions of the
ELA standards. This HUB primarily focused on the reading comprehension standards that fell within the ELA standards. The students saw this HUB as social studies, but in all actuality the HUB was highly focused on reading comprehension and reading fluency. The students were assessed on reading fluency with their social studies content. Reading comprehension strategies were taught through their social studies textbook and content area leveled-readers.

Mathematics HUB

This HUB contained one primary teacher and one support teacher. This HUB was responsible for covering all the mathematics standards provided by the state. As the HUB design continued to develop, the goal was to bring more awareness to the mathematics teacher about how to integrate the ELA standards within the daily mathematical practices.

Inquiry HUB

This HUB reinforced the ELA, mathematics, science, and social studies standards through writing. The HUB was encouraged to collaborate with the science and social studies HUBs to research, publish, and present individual or group projects that incorporated all content areas. The HUB supported the science and social studies HUBs through research projects that include historical figures, simple machines, and famous inventors. Upon completion of the research the students then published their work through technology integration and gave oral presentations to their classrooms. The HUB integrated technology across all contents. For example, in social studies the class was learning about historical figures. So, the inquiry HUB completed a research project on those historical figures, created a presentation, and presented their study to the class.

The HUBs were designed to build a sense of teamwork and collaboration. RCA’s 2nd-grade teachers and support staff were challenged with integrating English-Language Arts
ons in the science and social studies courses. Transitioning into this educational delivery model did not come easily for all. Each teacher implementing this model came with her own unique ideas, concerns, struggles, and strengths. On-site, ongoing, and individualized professional development was needed and provided. For example, professional development was provided in assessment building, lesson planning, and building resources. Lessons were modeled. Lessons were observed and then feedback sessions were provided. Whole-group informational sessions, small group, or individual sessions were held to further develop an understanding of standards and cross-curricular integration. Collaboration between teachers and administration was ongoing and essential in effectively implementing the infusion of ELA standards into the science and social studies curriculum.

Planning for On-site, Ongoing, and Individualized Professional Development

To begin the study, my co-researcher and I planned a whole-group informational session with the participants. During this session, teachers signed consent to participate in the study, and were administered a pre-study Teacher Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2011, Appendix B). During this session, the participants were given an overview of content integration throughout the HUB system. In this model, reading was taught through content areas and supported across all classrooms. As the session continued, we explained to the participants that our goal throughout the implementation of content integration was to provide support that was tailored to the individual. Support was ongoing throughout the implementation of content integration at RCS. We expressed that we wanted the participants to maintain open communication and have a willingness to express their needs, wants, and desires for their individual HUB, as well as, the HUB system as a whole.
Getting to know the individual teacher was essential when implementing on-site, ongoing, and individualized professional development. Through participation in whole-group and individual sessions, multiple interviews, and completion of the TSES, the individual needs of each teacher were established. See Chapter Three for the coding process in order to identify each participant’s needs. Throughout the process of getting to know each teacher, roadblocks began to surface for the individual and the group. These roadblocks, later identified as themes throughout the study, were obstacles that the teachers faced when embracing the implementation of content integration. As the researchers and part of the administrative team at RCS, it was essential to address each roadblock in order for the teacher to move forward.

My co-researcher and I implemented four professional development models (Appendix J) throughout the study in order to meet the individual teacher needs as they arose throughout the innovation. Through the interview process, roadblocks were recognized for each participant. In order to provide individualized support to address these roadblocks, we developed PD sessions that included the following: whole-group informational sessions, individual training sessions, model-observe-feedback, and a resource bank and usage. These methods of professional development allowed us to address the individual concerns of each teacher that arose throughout the interviews, TSES (Tschannen-Moran & Hoy, 2001) results, and informal communications. Being a part of the RCS administrative team facilitated the communication between the participants and me to be as frequent as the participants needed. During the initial phase of content integration, communication was very frequent. As the implementation continued, the communication began to spread out as the participants became more confident and comfortable with content integration. Through identifying the roadblocks the participants faced while
implementing content integration and addressing them through individualized professional
development, helped my co-researcher and I be responsive to teachers’ needs.

**Implementing the Process of the Innovation**

The process of implementing on-site, ongoing and individualized professional
development within RCS followed the steps shown in Table 4.1:

Table 4.1

<table>
<thead>
<tr>
<th>Steps for Implementing On-site, Ongoing, and Individualized Professional Development</th>
<th>Participation</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Administration of TSES</td>
<td>Teacher independently completed the 24 item questionnaire.</td>
<td>To determine teacher perceptions of her individual ability to make a difference in the educational experience for students.</td>
</tr>
<tr>
<td>Whole-group Informational Session</td>
<td>All teachers participated.</td>
<td>To receive an overview of content integration and begin communication between participants and researchers of individual needs.</td>
</tr>
<tr>
<td>Initial Interviews</td>
<td>All teachers participated in the initial interview.</td>
<td>To obtain individual strengths and weaknesses of the participants. To gauge concerns and areas of individual focus per participant.</td>
</tr>
</tbody>
</table>
| Gathering of Data                                                                   | TSES
Interview 1
Informal Communication                                                            | To give the participants a voice. Through their comments, and responses on TSES; roadblocks (themes) were identified. |
| Planning of Individualized PD                                                        | Co-researcher and I collaboratively planned individual training sessions, model-observe-feedback sessions, and gathered supplemental resources. | The purpose of individualized PD was to directly address the individual participant’s roadblocks while implementing content integration through the HUB system. |
| Implementing Individualized PD                                                       | Each participant varied in PD methods delivered by researchers. | To meet the needs of each participant by directly planning PD to address themes. |
Follow-up Interview | All teachers participated in follow-up interview. | To follow-up on changes, continued concerns, or areas of growth for each participant.
---|---|---
Final Administration of TSES | Teacher independently completed the 24 item questionnaire. | To determine if participation in On-site, Ongoing, and Individualized PD that addresses individual concerns caused an increase in the individual level of efficacy.

During the initial whole-group information session, my co-researcher and I began with an introduction of the implementation of content integration through the HUB system referenced on pages 19-20 of Chapter One. The demographic information of each participant, located in Chapter Three within Table 3.1, provided the degree level and area of certification that each participant held. In addition to the demographic information of each participant, it was essential to have an understanding of the role that each participant held with their HUB and with the HUB system as a whole. Each member was vital to the HUB system. The role of each participant was provided in Table 3.2, provided within Chapter Three.

**Designing of Individualized Professional Development**

Through analyzing the data collected by the TSES (Tschannen-Moran & Hoy, 2001) and interviews, the individual needs began to surface for each participant. Just like our students, the participants all began the study with specific needs based upon their personal concerns, insecurities, norms, and prior experiences. In order to effectively meet the needs of the group, the process must begin individually by meeting each participant’s needs through providing on-site, ongoing, and individualized professional development. The topics of each professional development sessions were purposefully selected to meet concerns that arose during interview sessions or that surfaced through the pre-TSES. See Appendix I for a detailed professional development provided to individual participants for a timeline and description of each session,
the participants involved, and the relevant themes. Within Appendix J, a detailed description of each method of professional development is provided with supported quotations and e-mail from participants in reference to their individual needs.

**Themes from the Interviews**

As mentioned in Chapter Three, each participant was interviewed twice, throughout the study, once during the initial phase of implementation of content integration and again at the conclusion of the study. The following seven emergent themes constitute the results of the axial coding in which the opens codes were grouped.

![Figure 4.1. Seven key themes provided by ATLAS.ti (Friese, 2017).](image)

These themes identified roadblocks that the participants faced throughout content integration. As the innovation continued professional development sessions were provided to help the participants embrace the roadblocks that surfaced. The theme of *evidence of change* supported that the participants had established or recognized a change within their practice. The remaining six themes are obstacles the participants faced during their practice. The numbers on the right side show the number of quotations supporting each theme.
Theme 1: Becoming a Facilitator

Through the implementation of content integration, the ability to purposefully integrate multiple content areas was essential. Teachers needed to have the ability to instruct using a science or social studies text, but also infuse the content with essential ELA components. Being a facilitator of content integration means having the ability to plan purposefully, maintain confidence in your ability to effectively infuse content integration, and having a flexible approach to content delivery. Throughout the interviews, participants expressed their concern with becoming a facilitator that allowed students to learn through investigation. Melissa stated during her first interview, “Being a facilitator— that is my weakness. I feel like I am structured” (Melissa, Interview 1, 2016). Lindy supported that stating, “I doubt what I am doing. I am second guessing” (Lindy, Interview 2, 2016). Teachers saw the need to be able to relinquish some control of instruction and trust their teammates to deliver the material as well. Lindy’s goal was to implement the concept of a team where the primary focus is reading + reading + reading. This would allow three of the four HUBs to primarily focus on reading through their individual content areas. In order implement this fully, the team must have a willingness to work together. 14 quotations, provided by five of the eight participants were found supporting becoming a facilitator as an issue or concern for participants. Within the visual representation below, the quotations provided are aligned with the participant providing the quotation.
Theme 2: Collaborative Planning Time

The implementation of infusing ELA standards into the science and social studies content required purposefully planning amongst the team of teachers. Within RCS, teachers did not have common planning time within the school day. Planning amongst the team required teachers to plan after school or during a working lunch. Teachers noted that collaborative planning time was needed in order to fully support one another across content areas. Through provided statements, participants noted the positives of planning and utilizing the specialty teachers within our school. Lacy (Interview 1, 2016) stated during her initial interview:

I just think what they are doing is fabulous. It is such a great model. I love the way they are pulling in people that have a specialty in something. They are able to use me,
technology, art music, and wherever they are seeing that connection. They are pulling us in.

On the other hand, Autumn stated, “They meet at lunch and I don’t get to collaborate with others. I’m in the lunchroom, so I miss out on the collaboration” (Interview 1, 2016). RCS teachers, due to several logistical concerns, were not scheduled to have a common planning time during the implementation of content integration, but participants were eager to build in time for collaborative planning. The participants were concerned with how to ensure everything was being taught throughout the study, without having the time to collaborate as much as desired. Collectively, six of the eight participants provided 12 quotations that supported the need for, or commented on the importance of having a collaborative planning time through the implementation of content integration.

Figure 4.3. Network view of collective quotations supporting collaborative planning time.
Theme 3: Effect on Students

To begin the study, a few participants were concerned at the impact content integration would have on students. Teachers were concerned with the ability of students to recall social studies and science concepts within this instructional delivery model. There were overall concerns with the insecurities of this new approach. In the business of educating children, participants were concerned and had doubts about how the change in instructional delivery would impact their students. Nicole stated, “I believe it is going to be a good change. We don’t know for sure without data” (Interview 1, 2016). In kindergarten and first grade, educators are extremely intentional with teaching students to read. The focus is on decoding, fluency, phonics, and comprehension. As a student progresses throughout the grade levels they begin to move towards reading to learn instead of learning to read. Typically this occurs within the 3rd-grade year, but within RCS the shift began earlier, as teachers were preparing their students for the next stage in their educational career (Spaull, 2016). For teachers, this was difficult, because each student reached this point at different times throughout the year. The participants were concerned with the maturity level of their students and the number of transitions required of them as they rotated from HUB to HUB. Although concerns were noted, throughout the implementation Hailey commented that students were responding better to the change than expected (Interview 1, 2016). In addition, Autumn said, “I think the students just go with it” (Interview 2, 2016). Although the concern on how students would respond was at the forefront for teachers, the teachers saw students adjusting nicely.

There was a concern of whether the students have the ability to master both the content standards and literacy standards simultaneously. Amanda supported this concern by stating, “Are
they going to be able to remember the content of science and social studies? I wish there was some kind of assessment to show that. I know there will be in the future” (Interview 1, 2016).

Participants within the study were cautious about how they believed the HUB model would fit in all content areas, especially in the mathematics HUB. Participants were cautious of the end product. How will this implementation affect students? Will we have enough time for reading? These were all questions and concerns that multiple participants expressed. All of the eight participants recognized a need for support in reference to the effect on student achievement. They provided 28 statements to support their concerns and/or praises of how the implementation of content integration would or did have a positive impact on overall student achievement.
Theme 4. Evidence of Change

The process of providing on-site, ongoing, and individualized professional development allowed the goal of individualizing to remain at the forefront. Providing support for the individual ultimately affected their overall classroom management, student engagement, and instructional practices. Change was evident over the course of the study. Based on Lacy’s understanding her students began to see her more as a teacher and not solely a media specialist (Lacy, Interview B). Collaboratively, teachers were planning instruction for the whole child. The 2nd-grade team was pulling in resources across the school from the media specialist, science lab teacher, and technology teacher. 20 statements were provided by the seven of the eight participants that supported a change or multiple changes the participants made within their instruction while participating in on-site, ongoing, and individualized professional development. Within the individual findings a more detailed description of the change process will be provided for each participant. Within the discussion of findings, results to answer the research questions are provided.
Figure 4.5. Network view of collective quotations supporting evidence of change throughout innovation.

**Theme 5: Resources**

The most common roadblock for several participants was resources. Specifically, teachers were looking for resources that not only delivered the content area materials (i.e Simple Machines), but also addressed ELA standards. Another roadblock within resources was the
leveling of each resource. Often times, teachers found resources to cover content, but the resources were above the reading level for 2nd-grade students. In order to teach any content, teachers were in need of instructional resources to design their lessons and meet the needs of their individual students. Throughout the interview process and informal conversations (face-to-face or through e-mails) the participants expressed their concern for grade-level appropriate resources to cover science and social studies content on a 2nd-grade reading level. During Melissa’s initial interview she identified the following as an area of need, “Finding resources, which I do have a great resource (researchers) pulling things for me and finding them at an appropriate level.” Collectively, there were 13 statements provided by five of the participants to support the need of instructional resources in order to effectively implement content integration.

*Figure 4.6. Network view of collective quotations supporting instructional resources.*
Coming from a traditional teaching approach, where ELA and Reading standards were taught primarily through fictional text provided by a basal reading series, the teachers were accustomed to finding leveled reading material through a reading series to reach each student in their classroom. The HUB system, outlined in Chapter One, structures reading so that it is taught throughout all HUBs. Collectively, reading is taught through science, social studies, and inquiry HUBs. This allowed the ownership of ELA standards and content to be shared. While reading across all contents, participants had a difficult time finding and locating reading material that addressed the content area, and that met the ELA standards, while on an appropriate reading level.

Five of the participants were in need of instructional resources to help plan and develop lessons that would allow them to integrate reading across the science and social studies content classes. Not only were they struggling with simply locating these resources, there were struggling with finding resources that were on their students’ level and not solely above level text, see Hailey’s email in Figure 4.7. During the unit on Westward Expansion she was unable to locate material on a 2nd-grade level, and this resulted in her believing she may only be able to deliver content in whole group, therefore this led to help in resource usage and individual session at a later time.

Figure 4.7. Email from Hailey regarding resource support.

**Theme 6: Relevance to Instruction**

For teachers to have buy-in when implementing content integration, change must have relevance to their individual HUB. As a mathematics teacher, content integration seemed
irrelevant. Through the study, the development of the mathematics HUB was ongoing. Change of instructional practices came with some uncertainties. Although changes within instructional strategies can cause insecurities, they were essential for growth within RCS. RCS has been recognized over the years for many successes which included the following: in 2014, RCS was named a National Blue Ribbon School by the U.S. Department of Education based on RCS’s overall academic excellence and progress in closing achievement gaps amongst subgroups. In addition, RCS was ranked number one elementary school within its state by schooldigger.com. In 2015, RCS’s high school was ranked in the top ten-percent of high schools. So, the need for changing instructional practices was not particularly sought after by all that embraced the philosophy, “Do not fix what is not broken.” RCS was fortunate to not live by this philosophy. RCS’s administration and teachers were constantly seeking new, innovative practices to enhance education.

In the 2016-2017 school year, RCS began the implementation of Project Lead the Way to engage all students in the subjects of science, technology, engineering and mathematics. RCS also earned the designation of an International Spanish Academy by the Ministry of Spain in 2016-2017. RCS was a school where change was sought, and the need for continued growth and development was front and center. RCS’s Chief Executive Officer and Upper School Director constantly quote, “If we continue to do the same, we will produce the same results.” Therefore, RCS was constantly seeking new innovative practices to improve instruction while maintaining relevance to instruction.
Theme 7: Scheduling and Logistics

The concern with scheduling and logistics was not only coming from the Lower School Director, but individual HUB teachers as well. Logistically, how does the team break down the standards or manage the instructional time—scheduling, how much time and resources allocated to each content? These were several of the topics of discussion amongst the team.

All eight participants provided a total of 21 statements that supported the key issue of scheduling and logistics. Teachers voiced concerns that through the HUB system that they were unable to see all students (Autumn) and shared that they did not have the appropriate content background to effectively implement their HUB (Hailey). When coming from a traditional content delivery model where each teacher takes her content and delivers that instruction, to
sharing the content and instruction, can and will be difficult. Teaching content standards with fidelity was essential. The logistics of planning out which HUB would cover which standards was a challenge for the team as a whole when beginning this process.

Through the use of Atlas.ti (Friese, 2014), themes arose per participant and collectively among the group. Each participant provided statements to support the themes that arose. The themes included concerns of the participants, focus areas for the participants, and areas of growth noted during the study. In addition to the themes that surfaced during the interview process, each participant entered the study with her own level of self-efficacy. Through the use of the TSES (Tschannen-Moran & Hoy, 2001) the individual levels of self-efficacy were noted, as well as collectively among the group. Identified roadblocks and levels of self-efficacy helped design individualized professional development to meet the teacher’s needs.

Figure 4.9. Network view of collective quotations supporting scheduling and logistics.
Whole-group Teacher Sense of Efficacy Scale Results

The study included eight participants that were directly involved with the implementation of integrating ELA standards into the science and social studies classrooms. Data collected through the TSES were broken down into three subcategories: student engagement, instructional strategies, and classroom management. The sub-category mean for all participants fell within the range from *quite a bit* to *a great deal* of influence. Although this left little room for growth, when you look at the individuals, there are relative strengths and weaknesses to address.

Table 4.2

<table>
<thead>
<tr>
<th>Collective Teacher Efficacy</th>
<th>Pre-Administration of the TSES</th>
<th>Post-Administration of TSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagement</td>
<td>7.05</td>
<td>7.84</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>7.08</td>
<td>7.83</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>7.18</td>
<td>8.08</td>
</tr>
<tr>
<td>Overall</td>
<td>7.10</td>
<td>7.92</td>
</tr>
</tbody>
</table>

There was no significant difference in TSES (Tschannen-Moran & Hoy, 2001) mean scores based on pre ($M = 176.00, SD = 13.96$) and post ($M = 178.25, SD= 13.07$), $t(7) = -1.28$, $p= 0.12$ administration. This may be due to the participants’ high initial (pre) ratings (i.e., ceiling effect) offering little room for growth. However, each participants scale scores are included as another data point in the analysis.

Table 4.2 provided the mean results for the pre and post Teacher Sense of Efficacy Scale for all participants within the study. As a whole, the group of 2nd-grade teachers entered the innovation with high level of collective teacher efficacy. During the post-administration of the TSES (Tschannen-Moran & Hoy, 2001), all sub-categories grew slightly but certainly not statistically significantly, with the highest sub-category falling with the area of classroom
management. Donhoo, Hattie, and Eells (2018) stated, “When efficacy is present in a school culture, educators' efforts are enhanced—especially when they are faced with difficult challenges” (p. 40). Change and school-wide initiatives can be difficult to encounter.

**Individual Findings**

Results from the TSES (Tschannen-Moran & Hoy, 2001) and the interview sessions, were analyzed for themes (roadblocks). Individualized professional development was then provided for each participant to meet the particular concerns and needs of the group and the individual within the methodology parameters presented in Chapter Three. Also analyzed were statements and comments that supported a change with their instructional practices, noted changes with their students, or within their HUBs.

**Melissa**

Melissa was in her 19th-year of teaching. She had been at RCS for four years and had experience both as a general education teacher and a special education teacher. Melissa had taught first through fifth grade across all content areas. Currently, Melissa’s primary focus was teaching science with the infusion of English-Language Arts. In the initial interview, Melissa described herself as someone who thinks outside the box. She enjoys collaborating with her team of teachers and described this year as her favorite year (Interview 2, 2016). Previously, Melissa had been the teacher who rotated between two HUBs providing support for her students, but this year she was situated in one HUB (science), and she stated she enjoys focusing on one HUB and felt she has better control of the learning in this manner.

**Teacher Sense of Efficacy**

According to the pre-administration of the Teacher Sense of Efficacy Scale (TSES), the results revealed Melissa’s lowest area of efficacy fell within the domain of instructional
strategies. When analyzing the data further, the area of instructional strategies included the following: responding to difficult students, gauging student comprehension of what is taught, crafting relevant and challenging questions for students, varying the assessment types, alternating strategies for students, and adjusting the level of difficulty of each lesson to meet individual student needs. The instructional strategy score of 6.75 fell within the Likert scale of some influence and quite a bit, revealing that she believed that some to quite a bit of influence in reference to instructional strategies. The area of instructional strategy was supported through the initial interview when Melissa’s stated, “Being able to be the facilitator that is my weakness. I feel like I am structured” (Interview 1, 2016).

Table 4.3
Melissa’s TSES Results

<table>
<thead>
<tr>
<th>Categories</th>
<th>Pre-Administration of the TSES</th>
<th>Post-Administration of TSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagement</td>
<td>8.25</td>
<td>8.75</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>6.75</td>
<td>8.625</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>8.375</td>
<td>9</td>
</tr>
<tr>
<td>Overall</td>
<td>7.8</td>
<td>8.8</td>
</tr>
</tbody>
</table>

The post-administration results showed a gain, although not statistically significant, across all three subcategories on the TSES, with the largest gain being in the area of instructional strategies. The previously identified concern in crafting relevant and challenging questions of students increased from a five to eight on the Likert Scale, which indicates that Melissa now believed she has a greater level of influence when addressing and crafting relevant questions. Melissa stated in interview two when answering a question about area of change, “I am trying more to infuse the ELA into the science content area standards” (2016). Melissa identified becoming more of a facilitator as her target area in the initial interview. Through transitioning to
integrating more ELA into the science content area, Melissa became more open to a variety of delivery methods. She wanted to give her students an opportunity to learn during exploration. As time progressed, Melissa saw a transition within her students: “The children are given the opportunity to observe and not be so teacher led” (Interview 2, 2016). In support of this, in a culminating activity the students were asked to create a simple machine. She stated, “They can build and create better than I can guide them through the process” (Interview 2, 2016). Although high levels of efficacy were identified in classroom management and student engagement during the pre-administration, Melissa’s levels increased throughout the implementation of content integration with the provided support of individualized professional development. In the area of classroom management, she gained the highest rating of nine, which indicates she perceives herself as having a great deal of influence in this particular area.
**Process of Change through On-site, Ongoing, and Individualized PD**

Table 4.4

*Melissa’s Areas of Concern based upon Interview Sessions Coded in Atlas.ti.*

<table>
<thead>
<tr>
<th></th>
<th>Interview A</th>
<th>Interview B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming a Facilitator</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Collaborative Planning Time</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Effect on Student Achievement</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Evidence of Change</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Relevance to Instruction</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Schedule &amp; Logistics</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 4.4 shows the number of quotations displayed by Melissa within each of the themes. Her three top concerns were relevance to instruction, scheduling and logistics, and effect on student achievement. Within the final interview, it was noted that Melissa’s concerns with those three areas were minimal and the interview session contributed greatest to areas of change noted by Melissa. These codes were supported through the pre-TSES scores where Melissa’s lowest item level score on the TSES was in crafting relevant questions and adjusting her lessons, varying assessments, and meeting needs of difficult students. Throughout the process of the innovation, individualized support was provided to address these concerns.
In order to address Melissa’s needs, the following professional development strategies were implemented: whole-group informational sessions, model-observe-feedback, resource bank and usage, and individual sessions.

Table 4.5

<table>
<thead>
<tr>
<th></th>
<th>Whole-Group Informational</th>
<th>Model-Observe-Feedback</th>
<th>Resource Bank &amp; Usage</th>
<th>Individual Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melissa's Participation</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

My co-researcher and I developed a lesson to model for Melissa. The lesson was modeled by my co-researcher, and Melissa and I observed. The lesson covered the science topic of states of matter. During the lesson my co-researcher incorporated the following key ELA standards: types of sentences, using context clues, parts of speech, synonyms, and sequencing. During the lesson, my co-researcher modeled ways to vary questions, along with strategies for integrating content. The actual modeling of the lesson addressed the area of questioning concerns, according to the pre-administration results of the TSES. The feedback session provided logistical reasoning for how the infusion of content was permissible, which was an identified concern based upon Melissa’s interviews. During Melissa’s initial interview she stated that her biggest area of change, after the modeled lesson professional development was, “Taking the ELA standards and infusing that with just the science content (Interview 1, 2016).” After the lesson, the PD continued with a follow-up session where the two researchers met with Melissa to discuss observations and takeaways.

In addition to the concerns mentioned in the interviews, the pre-TSES administration suggested a lower level of efficacy in the use of varying assessments. In order to help address this need, a resource bank was created on Google Drive to provide Melissa with a variety of
resources to enrich lessons and assessment with a focus on science content within the English-Language Arts standards. After the resource bank was created, Melissa requested an individual session with researchers to review shared resources, and discuss how to address designing student assessments in this manner. Collaboratively, Melissa, my co-researcher, and I designed an assessment that addressed the science content and ELA standards covered within the lesson. This allowed Melissa to use this assessment as both a science and an ELA grade, but allowed the student to only partake in one assessment. As evidenced through the TSES post survey results, Melissa’s level of efficacy that addressed providing a variety of assessment increased from a seven to a nine on the Likert scale.

Melissa noted in the first interview a strength for being structured and having the freedom to explore. Although structure was a strength, the thought of being completely teacher directed was a seen as a weakness for Melissa. She indicated that one area of change was within the content delivery. Previously, she had been a 2nd-grade self-contained teacher. In this model, she taught her homeroom students all four content areas. She was used to having control over the time and activities in the classroom. Then last year, Melissa had the opportunity to support students in a variety of classes as she co-taught with other content area teachers. Now, she was back in one room with the science content and the infusion of the ELA standards. She discussed how this year was her favorite, and she was able to focus on one area. She believed the students were benefiting from this approach to teaching and learning as well. Melissa (Interview 2, 2016) stated:

The day goes by fast for the children and I feel I can keep their attention, and about the time we are about to lose the focus, it is time for them to go to a different area or focus.
The second interview revealed that Melissa’s personal strengths were the ability to be flexible and approach a topic with an open mind. Even though Melissa realized that classroom structure was important, she saw great value for students to explore. She stated, “The children are able to observe and not be so teacher led” (Interview 2, 2016). Melissa gave an example in which students were given the opportunity to explore and create simple machines. She revealed that their products far surpassed her expectations. Although, Melissa embraced this process of integration of science and ELA standards, there were challenges along the way. Melissa was continuously looking for ways to improve her practice. Through having support in modeling lessons, providing resources, and guidance in building appropriate assessments Melissa strived for growth. Throughout this process Melissa did grow in all areas of the TSES, and provided evidence of change in the interview sessions. The challenge for Melissa was maintaining a balance of structure and flexibility, and the discernment of knowing when to fluctuate between the two. She concluded in the final interview that her area of change was, “I am trying to infuse more of the ELA standards through the content area of science.” Then when asked how the students were responding she stated, “They are loving it” (Interview 2, 2016).

Lacy

During the time of the study, Lacy was in her 22nd-year of teaching, and was in her 8th-year at RCS. She had the greatest number of years of experience among the group, with knowledge in teaching early childhood, instructional technology, as well as library media. She had teaching experience in grades first, third, and fifth where she taught in a self-contained and content specific classroom. Lacy currently oversaw the elementary and middle grades media center, collaboratively planned and facilitated literary lessons, and instructed technology lessons with the elementary grades. During Lacy’s interview session, she identified herself as having
strengths and experience in knowing what resources are available to support teaching and learning. She describes herself as communicating well with some of the 2nd-grade teachers, but recognized that not all teachers were seeking her support and expertise. She viewed her role as someone who can provide support, and supplement lessons with resources and guidance.

**Teacher Sense of Efficacy**

According to the pre-administration of the TSES, Lacy began the study with the lowest area of efficacy in instructional strategies. Although instructional strategies was deemed the lowest area, her mean score fell with the range from *quite a bit* to *a great deal* of confidence within this area. When looking at specific areas within instructional strategies the following surfaced: responding to difficult questions and implementing alternative strategies within the classroom. Lacy’s areas of greatest personal strength fell within student engagement and classroom management. She perceived herself as having great impact in the areas of helping students think critically, managing student behavior, student motivation towards learning, and having students follow classroom rules.

Table 4.6

<table>
<thead>
<tr>
<th>Lacy’s TSES Results</th>
<th>Teacher Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories</td>
<td>Pre-Administration of TSES</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>8.375</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>7.875</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>8.375</td>
</tr>
<tr>
<td>Overall</td>
<td>8.25</td>
</tr>
</tbody>
</table>

At the conclusion of the study, Lacy continued to display high levels of overall efficacy in regards to student engagement, instructional strategies, and classroom management. The highest gain was in the area of instructional strategies which moved closer towards the *a great*
deal on the Likert Scale. When readdressing crafting good questions and implementing alternative strategies in the classroom, these components either remained the same or increased in value. The one area in which Lacy declined was classroom management. Within her interview session, Lacy recognized that the structure of the HUB and the integrated approach to content created a logistical challenge for her in the media center. Lacy stated “This (teaching within the HUBs) leads to another challenge of managing the media center” (Interview 1, 2016). In working with the 2nd-grade HUBs, this removed Lacy at times from the media center, which did cause logistical concerns of managing both learning environments. Specifically, Lacy rated lower in regard to the following: controlling disruptive behavior, students following rules, and responding to defiant students. Although this level did decrease in overall value, Lacy continued to fall within the quite a bit to a great deal range of influence when working with students.
Process of Change through On-site, Ongoing, and Individualized PD

Table 4.7

Lacy’s Areas of Concern based upon Interview Sessions Coded in Atlas.ti.

<table>
<thead>
<tr>
<th>Area of Concern</th>
<th>Interview A</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming a Facilitator</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Collaborative Planning Time</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Effect on Student Achievement</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Evidence of Change</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Relevance to Instruction</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Schedule &amp; Logistics</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

In Table 4.8, Lacy’s number of statements per area of concern or growth was noted in her single interview during the innovation. As the researcher, it was noted that there was minimal interaction between Lacy and the researchers during the duration of the innovation. Although, little communication took place between us, Lacy discussed that her interaction with other participants increased throughout the innovation. Lacy’s top two concern areas were collaborative planning time and scheduling and logistics. Due to Lacy’s role as the media specialist, finding the time to collaborate with the 2nd-grade team was challenging. On the other hand, Lacy did provide feedback on ways in which the innovation has allowed for change in her instructional practices. Lacy participated primarily in the whole-group informational sessions, but provided support and collaboration for the primary HUB teachers. Lacy did not require the
use of model-observe-feedback or resource bank and usage. Through the media center, Lacy was able to help by providing needed content resources throughout the innovation.

Table 4.8

<table>
<thead>
<tr>
<th></th>
<th>Whole-Group Informational</th>
<th>Model-Observable Feedback</th>
<th>Resource Bank &amp; Usage</th>
<th>Individual Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lacy Participated 2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

An area of change noted by Lacy was in working outside of the media center and more within the classroom. Lacy commented, “I began to work outside the media center and more in the classroom, co-teaching with the inquiry HUB” (Interview 1, 2016). Through this innovation, Lacy felt as though the students’ perception of the role of the librarian evolved more into the role of a classroom teacher. Lacy stated in her interview, “The students are seeing me more as a teacher” (Interview 1, 2016). As noted in the TSES results, the level of instructional efficacy increased. This process allowed Lacy to collaborate more with the inquiry HUB. Although this allowed Lacy to work more closely with the teachers and students in the classroom, the logistics caused some management concerns with the media center. Just as all the specials teachers within an elementary school, specials teachers can begin to feel isolated from the classroom. Lacy shared that her biggest area of weakness was communication with all teachers. Lacy stated:

I know what’s going on in the inquiry HUB, but I don’t have communication with the other teachers. I don’t know what they are doing or what they need or how I can help them or supplement what they are doing. (Interview 1, 2016)

The professional development with Lacy was limited to two whole-group informational sessions. Lacy’s role in this study was truly to be that resource and collaborative partner to the team. As within all resources, some participants utilized the media more than others. The
students’ change through this process was far greater than the teachers in reference to the media center. Students began to see the media specialist as a teacher and a resource. Lacy stated, “We probably check out three or four times a much nonfiction as fiction anyway, which I would tend to say is not typical” (Interview 1, 2016). Students were making the content connection with the library resources. She discussed that when the students were learning about the solar system in class, that her shelves were empty. Not a single book remained on solar system in the library. The students were eager to learn more about the content they were studying. Lacy truly embraced her role of supporting teachers through the initiative rather than leading the initiative. Lacy consistently displayed an interest and willingness to share resources that would support the implementation of content integration. Lacy stated, “I am finding resources and helping by co-teaching. I am trying to figure out how to best support the team” (Interview 1, 2016). As a resource provider, Lacy saw value with the implementation of content integration. As a classroom teacher, the participant witnessed content connections being made by the students. On the other hand, as a resources provider, Lacy noted an increase in the interest of students checking out library resources based on the content students were studying. Although the levels of individual subcategories shifted for Lacy, her overall level of self-efficacy remained high. She was excited to see resource teachers being utilized to improve student learning. She commented, “They are pulling in people that have a specialty. They are pulling in library, technology, music and art” (Interview 1, 2016). The 2nd-grade team was planning with a purpose.

**Lindy**

Lindy had a total of five years of teaching experience and all five years had been at RCS. She had experience teaching Pre-Kindergarten thru 2nd-grade. Lindy held a Specialist Degree, and had teaching experience in all core academic content areas. Currently, Lindy’s focus was
the integration of all content areas through the Inquiry HUB. Lindy infused science and social studies into reading, extended learning in mathematics, and taught writing across all content areas. Within the initial interview, Lindy described herself as one who strives to do the best she can for her students, no matter what. She was open-minded and embraced change. This love for learning continued throughout the innovation, as Lindy stated in her final interview, “I am willing to do it, even if it is more difficult on the teacher’s end” (Interview 1, 2016).

**Teacher Sense of Efficacy**

Lindy’s pre administration of the TSES resulted in close ratings in regards to the three subcategories of student engagement, instructional strategies, and classroom management. Her overall mean score fell within the range from *quite a bit to a great deal*. Lindy scored slightly lower in the area of student engagement. Lindy rated herself a six, which fell between *some influence* and *quite a bit*, regarding how she perceived her ability to motivate students that show low interest in schoolwork, and how to foster students’ creativity. In addition to these, Lindy rated the area of responding to difficult questions from students at a level six, which impacted the overall score on the subcategory of instructional strategies.

Table 4.09

<table>
<thead>
<tr>
<th>Lindy’s TSES Results</th>
<th>Teacher Self-Efficacy</th>
<th>Pre-Administration of the TSES</th>
<th>Post-Administration of TSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Engagement</td>
<td>7.25</td>
<td>8.375</td>
<td></td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>7.375</td>
<td>7.75</td>
<td></td>
</tr>
<tr>
<td>Classroom Management</td>
<td>7.875</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>7.5</td>
<td>8.208</td>
<td></td>
</tr>
</tbody>
</table>

Most significantly on the post-administration of the TSES, Lindy obtained greater than an increase in the area of student engagement. Particularly, the response on how well she can
motivate students who show little interest in school work increased from a six to a nine (highest rating) on the Likert scale. This score was supported through Lindy’s final interview, when she stated, “They are excited. They inspire me. They are absorbing it and running with it” (Interview 2, 2016). This suggested that Lindy believed she was capable of motivating her students. In regards to fostering student creativity, Lindy remained at a level six. Only one specific question under the area of instructional strategies decreased slightly from an eight to a seven in the ability to provide alternate explanations to students. There was an increase in mean score in reference to the subcategory of classroom management, which fell just short of earning a great deal rating.

Process of Change through On-site, Ongoing, and Individualized PD

Table 4.10

<table>
<thead>
<tr>
<th>Lindy’s Areas of Concern based upon Interview Sessions Coded in Atlas.ti.</th>
<th>Interview A</th>
<th>Interview B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming a Facilitator</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Collaborative Planning Time</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Effect on Student Achievement</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Evidence of Change</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Relevance to Instruction</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Schedule &amp; Logistics</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The process of change for Lindy began with an overview of the innovation where resources were shared, examples of integration were noted, and discussions of individual teacher
needs were discussed. Throughout this process Lindy was eager to participate. One statement that Lindy continuously shared with the researchers was, “I love change.” When asked to explain, Lindy felt she maintains an open mind and has the ability to be flexible. Lindy was the first participant to seek out support from the both researchers. In Table 4.10, the numbers of quotations per code are provided in reference to Lindy. As noted, Lindy was open about her concerns or areas of growth across the board. Lindy was eager to participate and sought engagement from the researchers to improve in all areas in reference to content integration.

Table 4.11

<table>
<thead>
<tr>
<th>Number of times Lindy Participated in Individualized PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole-Group Informational</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

As the initial whole-group informational session ended, Lindy stayed after with her calendar and scheduled a time to meet with us. In fact, we met with Lindy the next morning during her planning period. When we walked in, she had all her materials laid out on her work station. The session included the following: pulling together resources that allowed for integration of social studies and ELA, reviewing leveled readers, and working on scheduling and logistics of her classroom. The three of us went through leveled readers that supported the science and social studies HUB. Lastly, we discussed scheduling. Lindy went as far as scratching her lesson for that day and substituting some of the new resources we had located that morning.

Throughout the continuous process of change, Lindy kept an open mind and sought change that she believed would positively impact her students. To support Lindy’s relative weakness in instructional strategies, noted through the TSES scale scores, we planned an additional individual session with Lindy. We completed the following activities: lesson planning,
seeking relevant resources, and reviewing the DOK (Depth of Knowledge) Levels. I was able to interview Lindy twice to see how the process of change was going for her, and what I could do to better support her individual areas of need. One comment regarding collaboration was, “I am planning and co-teaching more than I have ever done in my career” (Interview 1, 2016). Lindy sought collaborative times with other teachers, just like she pursed additional individualized support from the researchers. She purposefully planned a time to collaborate with the Media Specialist, technology teacher, and the science lab teacher. During Lindy’s second interview, she recognized this change in her planning: “A change that has been made is the collaboration amongst participant, utilizing the support teachers” (2016). Lindy’s greatest area of gain was in student engagement on the TSES, which was supported in the interview statement, “They are loving it and they are growing” (Interview 2, 2016). When asked what is one area of change you have made? Lindy’s response was collaboration. This was evident in the times she sought support, guidance, and feedback throughout this process.

After the completion of the initial professional development session and then a session to work on resources and instructional strategies, Lindy invited my co-researcher and I into her room for an observe-feedback lesson. My co-researcher went into Lindy’s room to observe a lesson in the inquiry HUB. Through this lesson Lindy was integrating poetry with phonics. The poetry did not consist of only poems that Lindy felt like teaching her class; these were poems on the historical figures the students were learning about in their social studies HUB. After the lesson, feedback was provided to Lindy. The students were engaged within the lesson and had prior knowledge on the figures in the poems. Lindy stated in her initial interview, “I am willing to do it, even if it is more difficult on the teacher’s end” (2016). Lindy had limited concerns going into the innovation, but did enter the innovation with recognized weaknesses. Lindy
admitted that, “My weakness is doubt. I have never taught this way before” (Interview 1, 2106). She continued to discuss later that she second guesses herself and her decisions.

Although Lindy had few concerns, the desire to do more was always supported through her work. Through the remainder of the process, Lindy continued to seek out new resources to integrate into her classroom and to support the other teachers. These resources were provided via e-mail and/or located within the Google Drive resources bank. Lindy was eager throughout the implementation of content integration. In the initial interview, Lindy noted a weakness in self-doubt and insecurity. When asked to identify a weakness, she stated, “I have lots! Sometimes I feel like I struggle with doubt; seconding guessing” (Interview 1, 2016). However, through the process of change, although the results were not statistically significant, the TSES results concluded that Lindy's level of confidence increased across all three subcategories. Even though Lindy mentioned doubt and second guessing in the final interview, she did acknowledge confidence in the effectiveness in the innovation. Lindy made the following statement about her students, “They are loving it. They are growing. They are making those connections. I don’t even look at test scores. I am confident” (Interview 2, 2016).

Nicole

Nicole had 18 years of teaching experience all within primary grades, five of which had been at RCS. She had experience teaching all content areas (math, ELA, science, and social studies) to Pre-Kindergarten thru 2nd-grade. She was currently in her first year of administration as the Lower School Director (LSD), a new position to RCS, and as an active member of the K-12 administrative team at RCS. Nicole served last year as 2nd-grade mathematics teacher and worked closely with the 2nd-grade teachers participating within the study. Nicole held a Bachelor’s Degree in early childhood education, as well as a Master’s Degree in Teaching and
Learning. Nicole described her strengths as being able to relate to the teachers, and seeing the benefit of reading across all content areas. She had an excitement and desire to see content integration implemented in more than one grade level at RCS.

**Teacher Sense of Efficacy**

Table 4.12

<table>
<thead>
<tr>
<th>Nicole’s TSES Results</th>
<th>Teacher Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Categories</strong></td>
<td>Pre-Administration of the TSES</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>7.25</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>7.375</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>7.875</td>
</tr>
<tr>
<td>Overall</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Nicole’s pre-administration of the TSES showed her lowest area of efficacy falling within the area of student engagement and instructional strategies. These scores fell within the range from *some influence* to *quite a bit*. Specifically, Nicole rated herself a four regarding her ability to improve the understanding of a student who is failing. Within the subcategory of instructional strategies, her score is also between *some influence* and *quite a bit*. Nicole rated herself a solid seven on all questions regarding instructional strategies, except the ability to provide appropriate challenges for very capable students, which she rated at a level six. The area of classroom management was her highest level of efficacy, which fell between the levels of *quite a bit* and *a great deal*. Nicole indicated that her highest level of efficacy was in reference to her ability to establish routines to keep activities running smoothly.

Through the administration of the post-TSES, Nicole showed the most gains in the areas of instructional strategies and classroom management, both of which increased by more than one rating point on the Likert scale. Nicole obtained a mean of 8.625 in reference to classroom
management, slightly below the highest rating of a great deal. All questions regarding this subcategory increased one to two levels on the rating scale. Of the questions regarding classroom management, five out of eight were given perfect a rating of a nine, which suggests the highest level of self-efficacy regarding classroom management. The area of instructional strategies also increased. Specifically, the area of providing challenges to very capable students increased from a six to a nine. Nicole showed growth in the area of student engagement, which continued to be her area of lowest self-efficacy, but still falling between the ratings of quite a bit and a great deal.

Process of Change through On-site, Ongoing, and Individualized PD

Table 4.13

Nicole’s Areas of Concern based upon Interview Sessions Coded in Atlas.ti.

<table>
<thead>
<tr>
<th></th>
<th>Interview A</th>
<th>Interview B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming a Facilitator</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Collaborative Planning Time</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Effect on Student Achievement</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Evidence of Change</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Relevance to Instruction</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Schedule &amp; Logistics</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

According to Nicole’s initial interview, she indicated her strength as being able to relate to the teachers. Considering that this is her first year out of the classroom, Nicole still felt
connected and related to the teachers. She compared herself as being like-minded, because the previous year she was a part of this 2nd-grade team. In response to the strengths Nicole brought to the innovation, Nicole stated:

Just coming out of the classroom seeing that I have been through the process of trying to teach all content areas to one group of students all day long and felt I was okay at everything but not really great at anything. I think now that I’m on the side of director being able to assist and support teachers with concerns if they’re not sure or have difficulty getting started. My strength is I’ve been there and through it. (Interview 1, 2016)

Nicole’s primary concern as Lower School Director was focused on the effects on student achievement and scheduling/logistics. As administrator over Kindergarten through 5th-grade, having a firm grasp of these two concepts was imperative.

Within her initial interview, Nicole stated, “I believe it is going to be good. We don’t know for sure without the data” (2016). Nicole continued to discuss that she saw the value of content integration, but her target area was the necessity in spreading the content integration into other grade levels. In an attempt to address Nicole’s goal of expansion, an individual training session was held with the CEO to begin strategic planning for implementation across all elementary grades for the upcoming school year. She stated, “Trying to get those on board, especially those who cannot see it would be the biggest challenge” (Interview 1, 2016). For the duration of the implementation of content integration, Nicole’s focus remained on setting the parameters for implementing across all grade levels.
Table 4.14

<table>
<thead>
<tr>
<th>Number of times Nicole Participated in Individualized PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole-Group Informational</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Nicole saw value in the innovation from the beginning as supported through a comment made from her parent perspective, “I have a child who wants to come to school every day, is using the vocabulary, and is self-motivated. They do not know they are learning” (Interview 2, 2016). Nicole had a 2nd-grade child that was participating in the HUB system that was implementing content integration.

The concern for logistics in the implementation shifted to the teacher buy-in for those who were not directly involved in the study. As one involved directly with the implementation of the innovation due to her administrative role, Nicole found herself supporting, promoting, and guiding the implementation in a way that would be beneficial school-wide. Her concern for spreading this model across the school remained throughout the implementation. She stated, “My weakness is just getting it started within other grade levels, and teacher motivation is a concern” (Interview 2, 2016). A final individual professional development session was held with Nicole, to discuss the logistics of the instructional practices of the team. She wanted to be aware of how the year-long plan was being laid out, and which HUB would specifically be addressing which standards. As a leader in the building, Nicole supported, guided, and saw value in the integration of content. Her plan was to continue this model throughout multiple grades in the upcoming school year.
Amanda

Amanda was in her first year teaching at RCS, with two years of teaching experience. Her role within the study was the special education teacher for the 2nd-grade team. Amanda, currently held a master’s degree, and was certified in special education, adaptive special education, and early childhood. She had taught grades first through fourth in all content areas. She enjoys incorporating reading into everyday routines for her students, and identified her areas of strength as seeing the value of reading throughout this implementation of content integration. Amanda stated in her first interview, “I look at reading a lot differently now, which is wonderful. I see how important it is. I see their improvement through the Scholastic Reading Inventory” (Interview 1, 2016). Within her inclusion classes, Amanda had the opportunity to lead a group on phonics and witnessed the students applying their skills throughout all contents.

Teacher Sense of Efficacy

According to Amanda’s pre-TSES results, she obtained an overall efficacy score of 6.83, which fell in the range of *some influence* to *quite a bit*. Her lowest level of efficacy fell within the subcategories of student engagement and instructional strategies. Within the area of student engagement, Amanda’s primary concerns pertained to the following: addressing difficult students, motivating students with low interest in school, helping students value learning, and improving the understanding of students who are failing. All of these areas obtained a score of six, which is slightly above *some influence*. In reference to instructional strategies, Amanda was concerned with offering a variety of assessment strategies, adjusting lessons to proper level of individual students, providing challenges for very capable students, and adjusting levels of questioning for students. Within the pre-administration, Amanda’s relative area of strength in perceived ability to make a difference was in classroom management, which was 7.25 on the
Likert scale, indicating that Amanda perceives she has *quite a bit* of influence on students in the area of managing the surroundings.

Table 4.15

*Amanda’s TSES Results*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Pre-Administration of TSES</th>
<th>Post-Administration of TSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagement</td>
<td>6.625</td>
<td>7</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>6.625</td>
<td>7.25</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>7.25</td>
<td>6.75</td>
</tr>
<tr>
<td>Overall</td>
<td>6.833</td>
<td>7</td>
</tr>
</tbody>
</table>

By the conclusion of the innovation, Amanda’s instructional strategies and student engagement both increased on the Likert scale, but in contrast, her classroom management decreased slightly. Amanda’s overall score was a seven, with a relative strength in instructional strategies. There was a noted increase in the following: varying assessment types and providing appropriate challenges for very capable students. In regards to student engagement, Amanda had a slight increase. Amanda saw a decrease in classroom management, specifically in regard to how to calm a defiant student or respond to a defiant student. Within the realm of special education, classroom management can have challenges of its own. Typically due to space concerns, Amanda led a lot of small groups in a nook in the hallway. These logistics can create concerns outside of the normal classroom. Also, switching to several classes and grade levels that Amanda serves can cause management concerns.
Process of Change through On-site, Ongoing, and Individualized PD

Table 4.16

*Amanda’s Areas of Concern based upon Interview Sessions Coded in Atlas.ti.*

<table>
<thead>
<tr>
<th>Area</th>
<th>Interview A</th>
<th>Interview B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming a Facilitator</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Collaborative Planning Time</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Effect on Student Achievement</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Evidence of Change</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Relevance to Instruction</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Schedule &amp; Logistics</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

According to Amanda’s initial interview, she indicated her strength being the enjoyment she had in incorporating reading into everyday routines and seeing the students really apply learned skill into a variety of classes. However, she stated, “It’s hard to incorporate more reading into math” (Interview 1, 2016). This supported her concerns in reference to the theme in Table 4.16 with *relevance to instruction*. The ability to incorporate basic reading skills into mathematics was a struggle for Amanda, as she supported her students in their mathematics class. She continued throughout the interview stating, “I would like to have more resources for math, if possible” (Interview 1, 2016). In order to address this concern, through the use of e-mail, math/reading resources were shared with Amanda to use in her class. Through individualized professional development, Amanda participated in three whole-group
informational sessions that took place to address the overview of content integration, use of resources, preparations for upcoming units, and planning assessments for students.

Within her initial interviews, Amanda’s concerns fell primarily in the effect on student achievement and providing instructional resources. Amanda stated during the initial interview, in response to a weakness she has noted throughout the process, “Trying to find the right resources, especially for the Core Knowledge stuff. That has been the most difficult. Then you find another strength, because you start researching and finding resources better” (Interview 1, 2016). Core Knowledge (Core Knowledge Foundation, 2018) was a supplemental curriculum that RCS implements in conjunction with state-specific standards. Although resources have been a struggle to find and implement effectively, Amanda stated, “It has been wonderful working with Ms. (teacher) and all the other teachers to find those resources. In a lot of school, teachers don’t collaborate that effectively” (Interview 1, 2016). Amanda had the opportunity to collaborate with two HUBs throughout the implementation of content integration. She co-taught specifically with the social studies and mathematics HUBs.

Table 4.17

<table>
<thead>
<tr>
<th>Number of times Amanda Participated in Individualized PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole-Group Informational</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

The resources provided to Amanda specifically aligned to social studies/reading and mathematics/reading. Passages were provided that incorporated reading fluency passages about place value or leveled readers on two-dimensional shapes. Resources were also shared through the Resource Bank on reading comprehension and fluency related to the social studies topics being covered. Although, Amanda showed excitement for integrating content, she was hesitant
about how students would respond, and about the overall effectiveness of this delivery method as it relates to student achievement. Amanda stated, “Are they going to be able to remember the content of science and social studies. I wish there was some kind of assessment to show that, I know there will be in the future” (Interview 1, 2016). This supported Amanda’s lower level of efficacy as it pertained to varying assessments. Collectively, Amanda struggled with the overall concept of assessment across all content areas. In order to address this concern, Amanda participated in a whole-group informational session of development of assessments.

As a group, the idea of allowing an assessment to address both content specific standards (simple machines) and reading comprehension questions on a cold read, allowed teachers to utilize one assessment for both standards. Amanda also acknowledged, “Another weakness of me is I don’t know how far to push them” (Interview 2, 2016). Her concerns during the interview were supported through her pre-TSES where lower levels of efficacy were displayed in reference to adjusting lessons to proper level for individual students and how to get through to most difficult students.

As with other participants, Amanda also shared the concern of knowing what was going on in all the HUBs. Because she is a special education teacher, Amanda also serviced other grades and was not always included in the grade level planning meetings. She also did not have the opportunity to co-teach in all HUBs. So, with the inability to collaborate effectively and frequently, Amanda commented, “It is difficult with my schedule to know what is being taught in science and inquiry HUB” (Interview 2, 2016). Although, the interactions with Amanda were limited to whole-group informational sessions and resources, Amanda embraced the usage of these resources and shared the importance of the implementation of the content integration. As her journey continued through the innovation, she had a desire to pull together more resources,
collaborate with her co-workers, and make a positive impact on student achievement.

Throughout the process, Amanda’s overall level of efficacy increased slightly. Amanda felt more confident in the design and her ability to pull and generate needed resources, “I am assisting in pulling materials” (Interview 2, 2016).

**Hailey**

This was Hailey’s first year teaching at RCS and her 15th-year teaching in all. She held a bachelor’s degree in early childhood and a master’s degree in educational leadership. Hailey had taught in grades kindergarten, second, and third across all content areas. Hailey came to RCS with a strong reading background, but shared her concerns about not being as strong in the area of social studies. Her primary role within the study was the social studies HUB lead teacher, with the integration of ELA standards. Hailey said she has, “a weakness of not having a solid social studies background” (Interview 1, 2016).

Hailey described herself in the initial interview as having a good reading background. She felt her strength was providing those reading skills and strategies for her students, which she attributed as a plus when trying to integrate reading into the social studies content. As the implementation continued, Hailey recognized that she was successful in integrating foundational skills into social studies more than at the beginning of the study. Hailey’s prior teaching experience was very structured and Hailey had difficulties recognizing that not all days had to be the same, and that she had the freedom to vary her lessons according to a style that fit best, the students’ needs, and specific content delivery. Hailey described her students adjusting to these changes by stating, “Students are responding better than expected, even with routine changes” (Interview 1, 2016). She had concerns with how they would adjust to varying the lessons, and her experience showed they did just fine.
Teachers Sense of Efficacy Scale

Hailey’s pre-administration of the TSES showed her overall score fell within the range of *quite a bit* to a *great deal of influence* with her perceptions of making a difference with her students. Her overall score during the pre-administration was a 7.45, while her post-administration was a 7.79. Hailey’s overall perceptions of her ability to make a difference with her students was high, although there were minor areas that fell below *quite a bit* as noted a relative area of weakness. In regards to item levels within student engagement, the only area of concern was a slight drop in getting through to difficult students. Hailey began with an overall score of nine (highest rating on Likert score) and ended with an overall score of five (some influence). Other than this indicator, Hailey saw increases in her perceptions of motivating students with low interest, and making clear expectations for students in reference to behavior.

Table 4.18

<table>
<thead>
<tr>
<th>Hailey’s TSES Results</th>
<th>Teacher Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Administration of the TSES</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>7.625</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>7.125</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>7.625</td>
</tr>
<tr>
<td>Overall</td>
<td>7.458</td>
</tr>
</tbody>
</table>

Considering the subcategory of instructional practices, Hailey’s overall scales scores during the pre and post administration fell within *quite a bit* to a *great deal*. Hailey saw increases in how much she could gauge comprehension of what is being taught, and in ability to craft good questions. On the other hand, Hailey saw a drop in the area of adjusting your lessons to the proper level for individual students. This is supported through Hailey’s interviews when she recognized an area of weakness and concern, “Finding resources, which I have great resources,
pulling things for me and finding things for me, but finding things at an appropriate level” (Interview 1, 2016). Hailey struggled throughout this process of finding resources on a 2nd-grade level.

Finally, in reference to classroom management, Hailey began with an overall level of 7.625 and ended with a solid 8.5. To highlight some item-level improvements, Hailey increased in the areas of addressing disruptive behaviors, and having students follow the rules. Logistically, Hailey maintained the ability to structure her classroom appropriately for the needs of the content and the students. Although, this did not come naturally, she was able to adapt and move forward. Hailey stated, “I thrive on structure and routine” (Interview 1, 2016). She followed up by stating, “This was not they style of teaching that was ingrained in me” (Interview 2, 2016).

**Process of Change through On-site, Ongoing, and Individualized PD**

Hailey was brand new to RCS and entered this study with an open mind and willingness to participate. She came to RCS as strictly a reading teacher, and shared concern with her background in social studies. Nevertheless, Hailey was on board and ready to begin the journey. Through the use of TSES and interviews, it became apparent to my co-researcher and I that Hailey needed support in gathering and utilizing resources effectively, scheduling and logistically managing the HUB and content, maximizing student engagement throughout the implementation, and how to differentiate the resources to meet all student’s needs.

Throughout the interviews Hailey made comments, represented in Table 4.19 as quotations from the interviews that addressed all themes. Again, Hailey was brand new to the implementation and was eager for guidance and support throughout this process. Hailey voiced concerns about resources, scheduling, effect on students, facilitating, relevance, and
collaborative planning time. She truly wanted to know how all content integration was going to impact her students.

Table 4.19

<table>
<thead>
<tr>
<th>Hailey’s Areas of Concern based upon Interview Sessions Coded in Atlas.ti.</th>
<th>Interview A</th>
<th>Interview B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming a Facilitator</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Collaborative Planning Time</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Effect on Student Achievement</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Evidence of Change</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Relevance to Instruction</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Schedule &amp; Logistics</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Hailey began her initial interview by stating, “My goal is to build resources” (Interview 1, 2016). Throughout the journey, communication was ongoing with Hailey and I in reference to resources. Hailey was prompt in sending upcoming units to my co-researcher and I to help begin looking for resources. Through the use of a Google Drive Folder and e-mails, resources were shared based upon social studies units that incorporated key reading skills. Again, at the follow-up interview, Hailey continued to support this need, “I am attempting to bring in leveled resources” (Interview 1, 2016). Not only did Hailey need resources to support integration of content, but she continued to run into the roadblock of the resources being too high for a 2nd- graders reading ability.
Throughout the interactions with Hailey, it was apparent the concerns she had for how the implementation would affect her students. She stated several times the need for data. “I need the hard data in my face” (Interview 1, 2016). As the implementation continued, Hailey’s opinion began to change, “I love it. I am definitely a person that needs to see data that it works. Every piece of data I have has shown tremendous progress” (Interview 2, 2016).

Table 4.20

<table>
<thead>
<tr>
<th>Whole-Group</th>
<th>Model-Observe-Feedback</th>
<th>Resource Bank &amp; Usage</th>
<th>Individual Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informational</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

Throughout the journey, Hailey participated in every professional development option available for participants. She attended all the whole-group informational sessions to gather as much as she could to support and guide her through this journey. Again, Hailey was new and needed guidance. She was always willing to ask for help when needed. The following e-mail (Figure 4.10) supports her drive and willingness to reach out for guidance.

As I’m sitting here reflecting on my first weeks at [Redacted], I have many thoughts swirling in my head. So many that I’m starting to feel lost. I would love for you to come during my planning period or after tutoring one day in the next few weeks to be my compass. I’ve talked and thought myself around in circles about how to best structure my Hub. I’m to the point that I may even have trouble getting out exactly what I’m thinking. I’m usually good at identifying the problem and forming a solution. The team keeps telling me that what I’m doing is fine. I would love for you to look at my plans and even come plan with me. I don’t know if I’m overwhelmed of the newness of it all and am second guessing myself or am just totally not doing it right. I don’t quite know if I have my mind wrapped around the integration fully. As you can see, this email is even going in circles. My thoughts are just everywhere! I have always admired you as an educator and truly value your thoughts and suggestions. Help!

Thanks.

Figure 4.10. Email from Hailey asking for logistical help in structuring her HUB.
After receiving this particular email, my co-researcher and I scheduled a time to meet with Hailey. During this individual session, we worked on the following: resources utilized for social studies through reading, differentiating materials, reviewing her year-long plan, and addressed specific questions in reference to resources that RCS had available.

In order to provide continuous support for Hailey through the logistics of the implementation, I had the opportunity to observe Hailey and Autumn within the social studies HUB as they implemented centers. Autumn is Hailey’s co-teacher in the social studies HUB. Her individual findings will be discussed later in this section. The observation was informal and observation notes were kept. Hailey wanted guidance on how to engage all students, how to incorporate reading fluency, and how to incorporate both nonfiction and fiction. After the completion of the observation, a follow-up session was provided; see Appendix D for an e-mail from Hailey inquiring about observation and eagerness for the feedback provided. In the e-mail Hailey stated, “Ok. See you at 8:30! I'm so interested to hear what you have to say! Remember good or bad, I want it!”

During the follow-up session Hailey, Autumn, my co-researcher, and I discussed strategies to engage all learners. During their centers one group was doing independent reading on rivers. In order to engage students more, my co-researcher and I suggested using sticky notes as a tool for students to interact with their readings. Students were to write down a new fact they learned and record it on a piece of chart paper. This would allow them to engage with their reading. Also, resources were shared that addressed reading fluency. These reading fluency probes covered the major rivers of the region (topic of study) but also addressed fluency (one-minute probes). This allowed students to build upon their background knowledge, as well as increase reading fluency.
In addition to observe and feedback, Hailey participated in several individual sessions. These sessions covered the following: reviewing assessments, planning for upcoming units of study, how to utilize current resources, and how to differentiate reading through resources. Hailey and I also took the time to review student data throughout this process. She wanted assurance that her students were growing. Throughout the process, the use of Lexile levels and diagnostic data showed growth for students in the area of overall student Lexile levels, as well as growth in informational reading. Again, Hailey stated, “I love it. I am definitely a person that needs to see data that it works. Every piece of data I have has shown tremendous progress” (Interview 2, 2016).

**Katie**

Katie had been with RCS for three years and had the opportunity to teach across several grade levels at RCS. When first hired, Katie was one of the two pre-kindergarten teachers, and then the next year moved up to kindergarten, and now is in her first year as part of the 2nd-grade team. Katie has been teaching four years and held a bachelor’s degree in early childhood education. Katie had taught pre-kindergarten through the 2nd-grade across all content areas. On the 2nd-grade team, Katie was the lead teacher in the mathematics HUB. She also was involved in extracurricular activities with the middle and high school students. Katie described herself at the initial interview as one who provides differentiation for her students. As the implementation of content integration began, Katie recognized the difficulty of infusing ELA standards into the mathematics HUB. She stated in the initial interview, “Infusing the other subjects in math has been difficult because I sometimes stay in my own little math bubble” (Interview 1, 2016). In teaching, there were times when things did become isolating for specific content areas.
Teacher Sense of Efficacy Scale

According to Katie’s pre-administration of the TSES, her scores were relatively similar across all subcategory levels. Her overall scores were within the range of *quite a bit* to a *great deal* of influence. Katie’s relative weakness was identified in both student engagement and classroom management during the pre-administration. Specifically, within the area of student engagement, Katie rated herself a level six, in reference to how well she perceived her ability to help her students value learning. Throughout the implementation of individualized professional development, Katie’s efficacy increased to a level eight. When looking at specifics within classroom management, the one area of concern that Katie perceived as a weakness was her ability to respond to defiant students. At the beginning, she rated herself a five, but that also increased to a level seven by the end of the innovation.

Table 4.21

<table>
<thead>
<tr>
<th>Teacher Self-Efficacy Categories</th>
<th>Pre-Administration of the TSES</th>
<th>Post-Administration of TSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Engagement</td>
<td>7.25</td>
<td>7.625</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>7.625</td>
<td>7.125</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>7.25</td>
<td>7.75</td>
</tr>
<tr>
<td>Overall</td>
<td>7.375</td>
<td>7.5</td>
</tr>
</tbody>
</table>

While, classroom management and student engagement began as Katie’s weaker areas, these surpassed the instructional strategies subcategory, which dropped over the course of the innovation. Within regards to instructional strategies, Katie saw minimal changes. As the innovation progressed, Katie tried more and more to find relevance of content integration within the mathematics HUB. The effort to incorporate more science and social studies into the mathematics HUB could have led to a lower score in instructional strategies for Katie. However,
the only significant drop in this subcategory was Katie’s perception of her ability to challenge capable students. This area began at an eight rating—*quite a bit to a great deal*—and ended at a five—*some influence*.

**Process of Change through On-site, Ongoing, and Individualized PD**

Throughout the implementation of content integration there was minimal involvement with Katie. In teaching the mathematics HUB, unfortunately, the primary focus was not on integrating the ELA standards into the mathematics HUB, but more into the science, social studies, and inquiry. Although, this was not the primary focus, Katie was willing to participate and to try new things. Based upon the interview process, one area of concern for Katie was in relevance to instruction. Katie stated, “I want to ensure students know the math standards prior to pulling in the other stuff” (Interview 1, 2016). Unlike the other HUBs that were supporting one another, Katie was more on an island by herself. Throughout the process, the inquiry HUB would occasionally embed mathematics skills through real world problems, but the lack of integration of mathematics into the science and social studies HUB was there. Katie really wanted to make sure she was covering all the mathematics standards well, before moving on and integrating more content areas.

Although, Katie cherished her time for mathematics, she also saw value in the other courses and wanted to be intentional in her planning for integration, “where it actually fits and is purposeful” (Interview 2, 2016). Katie stated, “Science and social studies are sometimes the lost content” (Interview 2, 2016). As the innovation continued, Katie saw her students and herself undergo changes. She stated, “The kids seem excited to hear about science and social studies materials in math class” (Interview 2, 2016). Katie associated the improvement of student behaviors to the transition between the HUBs, “rotating classes has helped with the behaviors”
(Interview 1, 2016). The frequency of movement between HUBs allowed students to be up and moving periodically throughout the day.

Table 4.22

*Katie’s Areas of Concern based upon Interview Sessions Coded in Atlas.ti.*

<table>
<thead>
<tr>
<th>Area of Concern</th>
<th>Interview A</th>
<th>Interview B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming a Facilitator</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Collaborative Planning Time</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Effect on Student Achievement</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Evidence of Change</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Instructional Resources</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Relevance to Instruction</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Schedule &amp; Logistics</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Another concern for Katie was collaborating with her team. Through teaching the mathematics HUB, this led to several unknowns for Katie. She stated in the beginning, “I don’t get to hear what they are learning in science and social studies. I don’t know their reading abilities” (Interview 1, 2016). Through collaboration with the “reading” teachers, science, and social studies HUBs, she would be more aware of the functionality of her students as readers. Katie wanted to have a better understanding of the year-long plan, in order to integrate these contents into the mathematics HUB, without collaboration with her teammates, which was a difficult task to complete. As not only a mathematics teacher, but also a former reading teacher,
Katie found it difficult to provide instruction without the “knowledge” and guidance of knowing the students as readers.

Table 4.23

<table>
<thead>
<tr>
<th>Number of Katie Participated in Individualized PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole-Group Informational</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

As previously stated, Katie’s involvement throughout this process was limited. Katie had the opportunity to participate in two sessions of professional development. Katie’s experience consisted of two whole-group informational sessions and one occasion where math/reading resources were shared, although resources were not a concern for her. The largest issue for Katie was that she wanted the planning to be purposeful and integrated where it fits. She did not want to force something that was not needed or intentional. As the innovation was concluding, Katie commented, “My strength in this process is more infusion of the reading and more writing, where I wasn’t doing that before—moving past computation and having students explaining their reasoning more” (Interview 2, 2016). Her goal in the upcoming year was to be more purposeful in the team planning. “My concern is keeping a year-long plan and purposefully scheduling a topic when the other content teachers are covering them materials. Instead of remember three months again when Ms. (teacher) was teaching scales” (Interview 2, 2016).

Autumn

Autumn was currently in her first year at RCS. Previously, she has had two years in education in grades pre-kindergarten and first. Therefore, this was not only her first year at RCS, but her first year in 2nd-grade as well. Autumn had a bachelor’s degree in early childhood education and a master’s degree in school counseling. She had experience teaching across all
content areas. Autumn’s primary role through the HUBs was as a teacher’s assistant in the social studies HUB and the mathematics HUB. During the interview process, Autumn described her strengths as having the opportunity to see students in multiple classes, and the ability to structure time within the HUBs. Autumn maintained an open mind to the implementation of content integration, but acknowledge that she logistically wanted to have a better understanding of how all of this was going to work. Autumn stated, “I want to learn everything. I want to learn everything from school expectations to what students know. I want to know all the details” (Interview 1, 2016). Autumn wanted to truly grasp the surroundings and culture of the school, in order to effectively implement content integration.

**Teacher Sense of Efficacy Scale**

According to Autumn’s pre-TSES, Autumn obtained an overall 6.5 rating on the Likert scale. This score fell within the range of *some influence* to *quite a bit*. This denotes that overall Autumn felt confident in her ability to make a difference with her students. In relative terms, Autumn’s subcategory of classroom management resulted in the lowest score, indicating that Autumn noted concerns in reference to the following: ability to calm a disruptive student, and how to respond to a defiant student. Both of these areas were given a score of five, which indicated *some influence*. As the on-site, ongoing, and individualized professional development was implemented, Autumn concluded the study by rating herself at an eight in reference to calming disruptive students, and a seven in addressing a defiant child. Autumn increased overall in the area of classroom management to a 7.875, which ranks between *quite a bit* to a *great deal* of influence when working with her students.
In reference to the subcategory of student engagement, Autumn began the study with an overall rating of 6.375. As the innovation continued Autumn increased in this area to a 7.5. Specifically, growth was noted in the following areas: responding to difficult students, and responding to disruptive or noisy students. Throughout the implementation of content integration, Autumn and her co-teacher Hailey, asked my co-researcher and I to specifically observe in this area. They were having difficulty maintaining student engagement during their centers. In the upcoming section, I will discuss the results of this professional development.

Lastly, the area of instructional strategies was Autumn’s relative strength. She began the study with an mean of 6.875, which fell just shy of quite a bit of influence. Specifically, a few noted weaknesses in this area were in reference to responding to difficult questions, varying assessment types, and challenging very capable students. These were common areas amongst the group, and appropriate support was provided. At the conclusion of the innovation, all of Autumn’s subcategories increased in regards to levels of self-efficacy, with the largest growth in the area of classroom management. This aligns with the comments provided in Table 4.24, where Autumn initially began the study with four particular concerns in scheduling and logistics, and ended the study with evidence of change and no statements in reference to scheduling and logistics.

### Table 4.2

<table>
<thead>
<tr>
<th>Categories</th>
<th>Pre-Administration of TSES</th>
<th>Post-Administration of TSES</th>
</tr>
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<tr>
<td>Student Engagement</td>
<td>6.375</td>
<td>7.5</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>6.875</td>
<td>7.875</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>6.25</td>
<td>7.875</td>
</tr>
<tr>
<td>Overall</td>
<td>6.5</td>
<td>7.750</td>
</tr>
</tbody>
</table>

*Autumn’s TSES Results*
Process of Change through On-site, Ongoing, and Individualized PD

Autumn began the study as a new member to the 2nd-grade team at RCS, her primary role was a supporting teacher in the social studies and mathematics HUBs. To Autumn, this was a benefit and a weakness. Autumn enjoyed that she was able to see the students over two HUBs, but was limited to only teaching half of the students, while another teacher assistant rotated with the other half of the students. Autumn commented, “My weakness is I don’t see the other half of the students” (Interview 1, 2016). Autumn had a desire to get to know all the students, just like the lead teachers were able to do somewhat, through the transition from HUB to HUB. Logistically, this was a concern because in order to allow the special education teacher to service her students and maximize teacher instruction, the team had to divide the time across the two HUBs. Another concern noted by Autumn was collaboration. Within RCS, teacher assistants share the duties and responsibilities with the lead teachers. One of Autumn’s duties was lunch duty with the 2nd-grade students. Oftentimes, this was when the 2nd-grade team would collaboratively plan. Autumn reported, “They meet at lunch and I don’t get to collaborate with others. I’m in the lunchroom, so I miss out on the collaboration” (Interview 2, 2016).

This lack of collaboration with the team left Autumn more concerned with the logistics of the HUBs. She wanted to know her responsibility in effectively implementing content integration. Being new at RCS, Autumn shared, “I don’t know what it is supposed to look like” (Interview 1, 2016). Autumn also had the students’ interest in mind when commenting on things in which she felt were going well, needed improvement, or simply needed changing. Autumn shared her co-teacher, Hailey’s, concern with appropriately leveled resources and appropriate assessments throughout the social studies HUB. She commented, “Resources have been an issue
the whole time, and finding the resources. Honestly, knowing if a resource is appropriately
leveled” (Interview 2, 2016).

The search for resources also led to a concern of appropriately designed and implemented
assessments. Autumn referenced the following, “I want to work on assessments. Talk about it in
content experts. My main interest is to make kids think” (Interview 2, 2016). In order to
addresses these concerns my co-researcher and I met and developed individualized professional
development to addresses Autumn’s primary concerns of logistics and scheduling, collaborative
planning time, and instructional resources. As the innovation continued, Autumn’s focus shifted
to becoming a facilitator and the effect on students. This was evidenced through provided
comments in the follow up interview sessions.

Autumn noted that the students had adapted well to the transition to HUBs. She
commented, “I think the students just go with it” (Interview 2, 2016). This was supported
through several of her co-workers comments. The students have adapted well to the change in
routine. Autumn commented that she has also experienced change throughout, “I am not
teaching social studies, I am teaching reading” (Interview 2, 2016). Although, her primary
reading focus was in the social studies HUB, she transitioned her way of thinking from content
to reading through content.
Throughout the innovation, Autumn participated in a variety of on-site, ongoing, and individualized professional development. To begin the study, she participated in the two initial whole-group informational sessions where my co-researcher and I discussed the implementation of content integration, how to utilize content textbooks as reading materials, and opened the discussion for participants to share their concerns. In addition to whole-group sessions, Autumn also participated in an observe-feedback session with her co-teacher Hailey. During this observation I was specifically looking for student engagement, integration of reading and social studies, and appropriateness of fiction and nonfiction text, and through this observation, field notes were collected. The biggest takeaway I had from the observation was the independent station for students. During the independent station, the students were required to read a book of choice out of a basket. All the books within the basket were on a second grade reading level and
were directly connected to the topic of study. Oftentimes, teachers allowed the students to read silently in a group. Our biggest concern was, are they actually reading? So, during the follow-up session, we collaboratively planned ways in which students could actively engage in their silent reading. This let the teacher know that reading was indeed taking place with all students.

Table 4.26

<table>
<thead>
<tr>
<th>Whole-Group Informational</th>
<th>Model-Observable Feedback</th>
<th>Resource Bank &amp; Usage</th>
<th>Individual Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

In addition to participating in observation and feedback sessions, Autumn was also a part of the shared Google Drive Resource bank. This allowed Autumn to access leveled reading materials to implement within the social studies HUB. In the final, whole-group informational sessions, the second grade team and I collaboratively worked on reviewing assessments, planning for upcoming units, incorporating research and writing, and addressing any additional needs that had arisen. Through the process, Autumn commented on areas of change within herself and her students. Through the interviews she referenced that her students have adjusted nicely to the routines of second grade. She stated, “I’ve learned a lot on how to structure time. Each class/unit looks different. Realizing that every day is going to look different. Realizing where to connect things” (Interview 2, 2016). Autumn shifted from logistical concerns to showing evidence of change while participating in the innovation.

**Discussion of Findings**

Throughout the study, on-site, ongoing, and individualized professional development benefited and impacted each participant differently. Over the course of the study, no two participants received the same plan for professional development, and therefore no two
participants ended the study with the same outcome. Below in reference to the research questions is a summary of the benefits that on-site, ongoing, and individualized professional development had on each participant, as well as how the professional development innovation ultimately impacted her instructional practice.

**Research Question 1: What were the benefits (if any) of implementing on-site, ongoing, and individualized professional development programs to sustain change?**

Throughout the innovation it was apparent that change did occur. The following benefits were identified throughout the innovation and supported through the remarks and results of the scales completed by each participant. The benefits of on-site, ongoing, and individualized professional development included:

- **Benefit #1- Individualized Plan of Support**
- **Benefit #2: Relevant Resources to Current Curriculum**
- **Benefit #3: Continuous Communication, Support, and Feedback**
- **Benefit #4: On-site Collaboration with Researchers and Team Members**

The support given was tailored to the individual based upon individual responses on the interview sessions, as well as the overall ratings on the TSES (Tschannen-Moran & Hoy, 2001). Through working with eight individuals, there were indeed commonalities amongst the group, and provided supports could be tailored to a group of participants, but again no two participants were prescribed the exact same professional development, based upon their exact same need (Benefit #1).

There were several key components that must be at the forefront in order to allow the innovation to be successful. There must be relevance. The participants saw value in the implementation of the content integration in either their own HUB, or in a team member's HUB.
Therefore, the buy-in and recognized relevance from all was apparent. Participants and researchers had to maintain open communication throughout the process. Teacher leaders and administration within the research site had to be available and approachable over the course of the study. First, in order to meet needs, the needs must be communicated. Personally, this communication cannot occur without a relationship. There must be trust between the participants and researchers, but more importantly, a trust between teachers and their administrative staff was required. Support must be ongoing. Support was given through modeling, but followed up with a feedback session (Benefits #3 & 4). Resources were shared through Google Drive Folder, but planning sessions were held on how to best utilize these resources and ensure relevance to current curriculum (Benefit #2).

Participants saw change throughout this process through their provided remarks. The key component was not the change in their practice, but the teachers saw their practice impacting their fellow teachers, students, and parents. Hailey commented, “I have parents coming to me—can’t believe the conversations that their child is coming home having with them” (Interview 2, 2016). On-site, ongoing, and individualized professional development implemented at RCS, allowed for the implemented of content integration to come to life within the 2nd-grade team. The team was exposed to the ideas through whole-group informational sessions, but through resources, individual sessions, and observations, individual needs were met that could not take place in the mass professional development world (Benefits #1, 2, 3 & 4). The concept of content integration could certainly be delivered and communicated through mass professional development.

When teachers attended mass professional development sessions, the component of implementation was missing. On-site, ongoing, and individualized professional development
provided support through the implementation phase (Benefit #3). Some teachers took advantage of these weekly, through e-mail or brief conversations in the hallways. The communication piece was instrumental in addressing the scheduling and logistical concerns. These concerns are not as easily addressed through mass professional development. Mass PD does not allow teachers to participate within the element of their own classrooms. Attending workshops and conferences does not take into consideration the logistical and scheduling concerns for individual classrooms and schools. Individualized professional development allowed the site to tailor the practice to meet their teachers’ needs in accordance with relevance to instruction, scheduling, effect on their students, collaborative planning time, and instructional resources.

Research Question 2. How did on-site, ongoing, and individualized professional development impact teachers’ daily practice?

Throughout this process, teachers provided direct statements to support impact on their daily practice. Based on the data analyzed we understand that by providing each participant individualized professional development, individuals had the potential to implement the innovation with an increased level of confidence and security that support would be provided when and if needed. Throughout the innovation the following impacts were noted through the participant’s comments and scale results:

Impact #1. Through immediate feedback and individualized support, the teachers’ abilities to implement the strategy increased over the duration of the study.

Impact #2. During the individual sessions, appropriately aligned resources were gathered to enhance current curriculum within the individual HUBs or collaboratively shared amongst multiple HUBs.
Impact #3. The collaboration provided much of the support needed to implement the strategy more effectively.

Through immediate feedback and support (Impact #1), Autumn recalled during her second interview, “I’ve learned a lot on how to structure my time. Each class/unit looks different. Realizing that every day is going to look different. Realizing where we need to connect to things” (Interview 2, 2106). Autumn realized that she did not have to conform to tradition.

Hailey also stated, “This was not the style of teaching that was ingrained in me” (Interview 1, 2016). Although a traditional style of teaching was the comfort zone for Hailey and Autumn, they were able, with support, to transition into a more flexible instructional delivery method (Impact #1). Autumn and Hailey were also very concerned with finding appropriate reading materials throughout the innovation. Through the use of Google Drive and e-mails, resources (Impact #2) were provided. These resources were primarily the resources of the research site. Few resources were needed for purchase for content integration. Oftentimes, it was a matter of realizing what resources were there and how to utilize those resources. Through individual sessions, resources were discussed and modeled on their usage. Autumn commented, “We have changed to trying to find reading passages specific to social studies” (Interview 2, 2016).

Nicole, the Lower School Director, saw the transformation within the 2nd-grade team as motivational. She stated, “My strength is the excitement and desire to see this implemented within the contents. The desire to see this happen in more than one grade level” (Interview 2, 2016). As a part of the administrative team at RCS, Nicole recognized that there was not a blueprint to this style of teaching. She recognized that in order for this to work, support must be given to the participants (Impact #1). She stated, “I see benefits already” (Nicole, Interview 1, 2016). Nicole saw benefits as a teacher leader with her teachers, as a leader with her students,
and within her own child. Nicole currently has a 2nd-grade student, and has been extremely pleased with the instruction provided.

This instructional delivery method allowed RCS to pull in resources (Impact #3) that oftentimes were not utilized to the fullest. Lacy, the media specialist, transitioned from a librarian to a classroom teacher in the eyes of the 2nd-grade students. They begin to see her differently and utilized her expertise in helping them select reading materials that aligned to the content being delivered. Lacy remarked;

They are working on solar system right now and my solar system shelves are GONE.

They are making the connections there. They can take what they are doing in class and they can supplement it with what they find in the library. (Interview 1, 2016)

During the discussion of the collective findings, it was apparent that on-site, ongoing, and individualized professional development impacted each participant’s daily practice differently. The changes were noted in their scheduling, collaboration, style of delivery, and within their students.

**Individual Benefits & Impacts of Innovation**

This section includes the findings of the study as they related to the two guiding research questions broken down for each participant and aligned to the overall benefits and impact that the innovation had on the individual participants.

**Melissa’s RQ1**

Throughout the implementation Melissa had specific areas of improvement she wanted to focus on and enhance. She truly wanted to become more flexible in her content delivery by allowing students to learn through investigation. Through collaboration with support teachers, she was able to implement and plan more effectively with the science lab teacher (Benefit #4).
During her second interview, Melissa stated, “Becoming more of a facilitator, doing this through the lab, not being so teacher led” (2016). Throughout the innovation, Melissa had the opportunity to participate in three sessions that included model-observe-feedback (Benefit #1). During this time, Melissa observed my co-researcher delivering a lesson on states of matter. After the observation was concluded, she was then able to deliver the lesson herself, and we observed her. At the conclusion, a feedback session was held. Through mass professional development, Melissa would not have had the opportunity for real world application with immediate feedback (Benefit #3).

Through the ongoing process, Melissa had the opportunity to get immediate support and feedback that allowed her to continue moving forward with the implementation of content integration (Benefit #3). Within the few months of the innovation, we were able to address her individual needs of assessment building through an individual training session. My co-researcher and I met with Melissa to plan and develop the unit assessment for states of matter. Through this we were able to not only address the content curriculum, but also integrated a cold read to address the ELA standards. Not all participants needed this, but Melissa did, and through individualization of professional development, her need was met.

**Melissa’s RQ2**

In reference to impact on instruction, throughout the innovation, Melissa was able to explore and try new ways to reach her students, and she began to collaborate more with the science lab teacher (Impact #3). Melissa noted during her initial interview a change with her content, and stated, “The biggest change is infusing the content. In the HUB of science and taking the ELA standards and infusing them” (2016). Within Melissa’s students she reported the following, “There is a excitement; love for learning through hands-on experiences” (Interview 1,
2016). As the process continued, Melissa confirmed the innovation in her final interview by stating, “I have become more of a facilitator; allowing the student to be more of an explorer” (Interview 2, 2016). Over the duration of the study, Melissa was able to transform her instruction and daily practices after participating in an individualized plan of support (Impact #1). She began infusing more ELA standards into her science HUB and allowed herself and her students to be more flexible and learn through investigation.

**Lacy’s RQ1**

For Lacy, the benefit of on-site, ongoing, and individualized professional development versus mass professional development was not captured during the duration of the study. During the study, Lacy solely participated within the whole-group informational sessions. Although, the benefits of on-site, ongoing, and individualized professional development were not seen, there were changes within her instructional practices as a result of the innovation.

**Lacy’s RQ2**

Throughout the duration of the innovation, Lacy perceived herself as a supporter and resource provider for the implementation of content integration. Lacy only participated in two of the whole-group informational sessions that really allowed her to see the overview of content integration. This experience allowed her to support teachers and students (Impact #3). The change in instructional practices that was noted was within Lacy herself, and more importantly in the students. The students transitioned from thinking of Lacy solely as a media specialist into a classroom teacher. Lacy began co-teaching in the inquiry HUB to enhance the collaboration amongst the team members. Once a week, Lacy and Lindy scheduled a time to meet and plan for upcoming units. The students were making connections between classroom topics and resources in the media center. Change was noted in Lacy as a supporter, and communication was enhanced
throughout this process. The hope is for this to continue throughout all HUBs as ongoing support is provided.

**Lindy’s RQ1**

In determining the advantages of individualized professional development versus mass professional development the benefits were noted for Lindy. Lindy participated in all three whole-group informational sessions, covering the study as a whole and the process of implementing content integration. Lindy entered the innovation with eagerness to grow. She stated several times, “I love to change.” She also commented that she would do whatever it takes for her students to grow. Mass professional development could effectively cover the topic of content integration amongst a 2nd-grade team, but what it would lack was addressing the roadblocks throughout the process. As Lindy was implementing, she sought support in the following: logistics, scheduling, usages of resources, enhancing DOK levels, and planning with multiple contents (Benefit #1). Through on-site, ongoing, and individualized professional development, my co-researcher and I were able to immediately address these concerns with Lindy (Benefit #3). Through individual training sessions we planned, shared resources (Benefit #2), and discussed logistical concerns that ultimately impacted Lindy’s overall effectiveness in the classroom. Addressing the roadblocks during the implementation phase allows the teacher to continue to move forward.

**Lindy’s RQ2**

Within the daily practices of Lindy’s classroom, the largest notable change was her collaboration with other participants (Impact #3). Lindy began planning weekly with the science lab teacher, technology teacher, media specialist, and the lead teachers of the other HUBs. The value in integrating content was grounded in the inquiry HUB. Lindy planned writing lessons to
enhance science and social studies. As the innovation continued, she began to implement real world mathematics problems to increase and deepen her students’ understanding of mathematical practices. Lindy’s instruction became more purposeful and driven. She was eager to find the exact resource needed, and through the resource bank and individual training sessions, these resources were found (Impact #2). After planning together, Lindy would push aside what she was doing and use something else. Through on-site, ongoing, and individualized professional development, Lindy was able to enhance her daily practices through tapping into the expertise of others and the collaboration of a team (Impact #3).

Nicole’s RQ1

Nicole was serving as RCS’s lower school director. In regards to the effectiveness of individualized professional development as opposed to mass professional development, the benefits were not directly pertaining to Nicole. The benefit of individualized professional development for Nicole was the assurance that her individual teachers’ needs were being met through purposeful professional development. However, throughout the innovation, Nicole did have her own concerns of how to incorporate content integration across multiple grades and eventually kindergarten through fifth grade. In order to address this need, an individual training session was held with Nicole, the CEO, and the researchers to discuss an expansion of this model in years to come (Benefit #1). Mass professional development does not allow schools to get into their individual day and logistics. Each school has its own unique schedules, activities, and priorities. Through on-site development, we were able to work through a plan to expand this model throughout the elementary school (Benefit #4).
Nicole’s RQ2

The impact of on-site, ongoing, and individualized professional development did not directly impact the instructional practices of the lower school director, but as a leader, she would like to see how the innovation impacted her teachers. Her goal throughout the study was to support the researchers and see this change be made, which she hoped would lead to other grade levels investing in content integration (Impact #3).

Amanda’s RQ1

Amanda’s schedule throughout the innovation was difficult. She did not have the benefit of solely working with the 2nd-grade team, as she co-taught in other grades as well. So her participation in the study was limited to whole-group informational meetings, and resource bank and usage (Benefits #1 & #2). Through mass professional development, Amanda could have received the needed information of content integration, but would have been limited to the sample resources provided through the instruction. During the individualized professional development, Amanda was provided relevant resources not only for the grade level she taught, but also for the unit in which she was planning and implementing. Through on-site support, Amanda was not alone. Amanda also had the support of her co-teachers that were also getting assistance for their individual needs as well (Benefit #3).

Amanda’s RQ2

Throughout the implementation of content integration, the most impactful change for Amanda considering instructional practices was planning. During interview two in reference to one area of change made, Amanda stated, “The way I am lesson planning, I look for ways to incorporate reading. I focus on reading and I’m learning different ways to research resources” (Interview 2, 2016). Amanda gained a focus with her lesson planning that filtered into her
mathematics and social studies classes. Utilizing provided resources through email and resources usage and bank, Amanda began to see other routes to use for lesson planning (Impact #2).

**Hailey’s RQ1**

As with other prior participants, Hailey could have received the informational portion of content integration in a mass professional development session, but without the ongoing and on-site portion, Hailey would not have received the needed individualized sessions to address the logistics, resources, and her student data (Benefits #1 & 5). While implementing content integration, Hailey had the opportunity to receive immediate feedback, guidance, and appropriate resources that impacted her current topic of study (Benefit #3). She had the freedom to seek out information and know that it would be addressed within the week by someone who understood the context. Through on-site, ongoing, and individualized professional development, Hailey’s first year at RCS and first year implementing content integration was successful. She respond to how things are going in her final interview, “I love it; I have seen the data” (Interview 2, 2016).

**Hailey’s RQ2**

Although Hailey was new to RCS, her willingness to participate was never in question. Hailey was vocal throughout her interview sessions that this style of teaching was not ingrained in her as an educator. She came to RCS with a strong reading background, but not a strong social studies background. Due to an integrated approach to content delivery and ongoing support, Hailey saw the growth in her students that encouraged her throughout the process. Her individual goal was to build resources, and the majority of the interactions and sessions with Hailey focused on this goal (Impact #2). During informal conversations with Hailey after the completion of the final sessions and interviews, I asked her what unit was coming up next, to begin looking for more. She responded, “You taught me well” (2016). Hailey gained the confidence to effectively
implement and locate needed resources. Through on-site, ongoing, and individualized professional development, the insecurities that Hailey faced in reference to content integration were addressed (Impacts #1 & 3). Through collaboration with Hailey and the researchers, and provided immediate feedback and support, these reassurances allowed Hailey to embrace the initiative and celebrate the successes of her students.

**Katie’s RQ1**

Throughout the innovation, the time spent with Katie was limited. Although as a former reading teacher Katie saw value in content integration, it was not a direct fit for the math class. She understood and stated the importance for the lost content of science and social studies, but making it fit into the math course was not something that happened daily or naturally. Through mass professional development, Katie could gain an understanding of content integration. As the years at RCS continue, Katie would like to be more purposeful with her planning and the team planning to begin to integrate more.

**Katie’s RQ2**

Although participation in on-site, ongoing, and individualized professional development was limited, there were changes that impacted Katie’s instructional practices. In the final interview, Katie noted, “We are keeping more journals in math. She stated, “I am trying to tie in science and social studies concepts, but it is hard to find where it fits” (Interview 2, 2016). She recognized the excitement of the students when she referenced science and social studies topics there were learning about. Katie’s plan is to have a better year-long plan in upcoming years, so that she can have a clearer understanding of what is taught when in each HUB to better support and embed these valuable subjects into math (Impact #2). Katie recognized that in order to
implement more effectively, she must build that collaboration between her math HUB and the science and social studies HUBs.

**Autumn’s RQ1**

Being new to a school and new to a team of teachers poses challenges itself, but when walking into a new team that is implementing a new initiative, these challenges are magnified. Through mass professional development, content integration could and was addressed in whole-group informational sessions. On the surface, teachers are then required to go and implement. Here is where the individualization and ongoing support ignites. Autumn needed further information to be successful (Benefit #1). What does it look like? What is expected of me? What resources are used and how? These were topics/roadblocks that my co-researcher and I could address as the process unfolded. Through observation-feedback, we were able to help with student engagement. In a follow-up session we looked at student data, resources, and planned lesson for implementation (Benefit #2). This support allowed the roadblocks to become fewer and farther between (Benefit #3). In the course of five months not all needs were met, but as the innovation continues and support stays on-site, there is likely to be more improvement.

**Autumn’s RQ2**

Throughout the innovation Autumn’s instructional practices were influenced by on-site, ongoing, and individualized professional development. Within the final interview, Autumn stated, “I’ve learned a lot on how to structure time and knowing that every day is going to look different” (Interview 2, 2016). As the innovation continued, Autumn saw new areas of focus arise. She wanted to work on assessments, make kids think, and have a better understanding of the resources provided (Impacts #1, 2, & 3). Autumn wanted to continue the process of learning. During collaboration with her team members and researchers, she wanted to learn more about
resources and was grateful for the support and feedback provided throughout. As the information and implementation continued, Autumn saw changes within her instructional practices, but better than that, she still continued to find areas that she personally wanted to improve.

**Summary**

Chapter Four began with an introduction of the participants within the study and their primary roles through the implementation of content integration. Emergent collective themes supported in by what our participants shared. These identified themes respond to the individual area of concern. As noted, were comments supporting an individual change within their practice.

Next, a description of the provided professional development was outlined. Although, there were four main methods of delivery in the professional development, no two participants were provided with the same styles or quantities of professional development. To begin to address the findings, the collective TSES was provided for the group. The second grade team at RCS, ranked high collectively on the TSES. These teachers were ready to embrace a challenge and demonstrated willingness to be members of study. Next, the discussion of findings with individual benefits and impacts were outlined in accordance to the overall research questions. Lastly, the individual participants were broken down according to each research question and support aligning to the benefits and impacts were provided.
CHAPTER 5

DISCUSSIONS, IMPLICATIONS, AND CONCLUSIONS

The purpose of this qualitative case study was to analyze the potential benefits of on-site, ongoing, and individualized professional development provided to teachers through the implementation of content integration. The qualitative case study was situated among a purposeful setting and participants. As noted in Chapter One, a key concern for teachers today is the wide-spread one-size-fits-all application of professional development (Berckenmeyer, 2014). Through the implementation of on-site, ongoing, and individualized professional development, the need for one-size-fits-all professional development transitioned into tailored made plans based upon the individual needs and concerns of each participant. As the researcher and part of the administrative team at the research site, the purpose in developing an individualized plan was designed to meet each participants’ needs in order to sustain and support the implementation of a new initiative.

Discussion of Findings as Related to the Literature

Through the implementation of a qualitative case study I was able to address a problem of practice in the educational field. As outlined in Chapter One on page 21, DeMonte (2013) recognized a breakdown of professional development as it relates to a teacher’s practice. Diaz-Maggoli (2004) noted that one-size-fits-all professional development does not allow for individualization based upon the needs and interests of the participants. Due to the ineffectiveness of mass professional development, a potential solution was developed within the research site. My co-researcher and I were guided by previous research shaping our provided models of professional development. Although during the study, the professional development sessions were specifically implemented to reach an individual need, we were able to apply and
utilize effective methods of professional development established by multiple authors (see Table 2.2). Through the use of interviews the participants’ experiences and concerns were shared that allowed myself and my co-researcher to tailor the sessions to meet the individual needs of each. An analysis of the interviews and scales led to the themes (roadblocks) that each participant faced throughout the implementation phase of content integration. Over the course of the innovation, professional development models were implemented to address the themes (roadblocks) of each participant and the group as a whole. Throughout the study, two research questions guided:

1. What were the benefits (if any) of implementing on-site, ongoing, and individualized professional development programs to sustain change?

2. How did on-site, ongoing, and individualized professional development impact teachers’ daily practice?

Through the analysis of the TSES (Tschannen-Moran & Hoy, 2001) and interview sessions benefits were identified that allowed the informants to embrace and implement content integration with support from on-site administration. Upon completion of the innovation there were impacts for each participant that ultimately benefitted their practice.

The innovation of on-site, ongoing, and individualized professional development was shaped around two guiding research questions. The research questions were designed to analyze the benefits of individualized professional development, as well as, the impacts of the innovation on teacher practice. For the remainder of Chapter Five, each research question will be addressed as it relates to literature review provided in Chapter Two. Following the research questions, a summary of the goals outlined in Chapter Three is provided and the results of the study as they
related to goals established. The limitations of the study, implications for future practice and a conclusion is provided.

**Research Question 1**

What were the benefits (if any) of implementing on-site, ongoing, and individualized professional development programs to sustain change?

The consulted literature within field of professional development (see Chapter 2) underscores that mass professional development is limited in the ability to differentiate for teachers. Mass professional development provides a “fix” for all participants regardless of the individual need (Piontek, 2016). Through the implementation of on-site, ongoing, and individualized professional development the ability to provide the differentiation for teachers was attained. While undergoing the innovation, participants displayed the following benefits that ultimately created a foundation in which change had potential to be sustained. Through the interview process, participants provided statements throughout to recognize a change made within their practice.

Benefit #1- Individualized Plan of Support− Over the course of the innovation, no two participants were provided the same plan of support. Each participant began the study with unique needs and therefore a unique plan of support was designed.

Benefit #2-Relevant Resources to Current Curriculum−Through the use of a Resource Bank, outlined in Chapter Four, e-mail communication, and individual work sessions, resources were provided to the 2nd-grade team that were related to their current curriculum needs.

Benefit #3- Continuous Communication− Support and Feedback. During the four-month study, communication was ongoing with each participant. Based upon their individual needs, feedback and support was given in a variety of modalities.
Benefit #4-On-site Collaboration with Researchers and Team Members. The benefit of being on-site with the participants allowed the researchers to collaborate as often as needed to provide the support for the participants. Participants were also given time in whole group sessions to collaborate with their 2nd-grade team.

Aligning with Bretzman et al.’s (2015) characteristics of effective professional development, outlined in Chapter Two, participants throughout the study were engaged with the development and planning. Through the ongoing process teachers were updated on their progress of implementing content integration. Through modeling, observations, feedback, and individual sessions the participants sought answers to questions and were provided needed feedback from administration to support one another more effectively. Given the individualization of the professional development models, participants were prescribed a tailored made plan of development to meet their needs. As the leader of the change process, I not only recommended or offered plans of individualization, the participants felt comfortable in asking for support during the innovation whether face-to-face or in an e-mail. Due to the innovation, collaboration between me and the participants was at the forefront of the study. Although the amount of collaboration varied among the participants the opportunities for collaboration was there for the taking. Participants were planning with their teammates and support staff and were eager to invite me into their classroom for observations and feedback. The energy of the participants was contagious.

The team of participants began the innovation collectively with a high level of teacher self-efficacy, as shown in Table 4.2. They were a team that not only perceived themselves as effective educators, but a team that perceived the group as a whole as effective (detailed discussion in Chapter Four).
Hord and Roussin (2013) developed six strategies for implementation of a new innovation which included the following: creating a shared vision, investing in professional learning, planning for implementation with required resources, monitoring progressing, providing ongoing assistance, and creating a context conducive to change. Through reviewing literature within the field of PD, my co-researcher and I developed PD to meet the individual needs, and those aligned to solid principles outlined by Hord and Roussin (2013). The strategies are listed below followed by specific examples of how these played out in the study.

Strategy One: Creating a Shared Vision - One participant, Lindy, stated in her initial interview as identified the vision as, “Trying to become that reading + reading + reading that we are striving to be (Interview 1, 2016). The group wanted to share the responsibilities of reading and expose their students to reading across multiple HUBs.

Strategy Two: Investing in Professional Learning - Participants and researchers were willing to invest their time and energy into professional learning to enhance their teaching practice. One participant, Autumn, stated in her interview session, “I want to learn everything. I want to learn everything from school expectations to what the student knows. I want all the details” (Interview 1, 2016). The participants sought clarification of expectations and support throughout implementation.

Strategy Three: Planning for Implementation of Required Resources - Resources were provided throughout innovation to support current curriculum needs of the 2nd-grade team. These resources primarily consisted of resources within the research site, minimal purchases were made. Through e-mails and a resource bank, these resources aligned to their current topic of study.
Strategy Four: Monitor Progress - In order to capture growth or change in needed support, interview sessions were conducted to give the researchers a snapshot of the current needs of each participant.

Strategy Five: Provide Ongoing Assistance - Over the course of four consecutive months, support (Appendix J) was provided across several different modalities to meet the individual needs of the participants.

Strategy Six: Create a Context Conducive to Change - Nicole stated, “I have an excitement and desire to see this implemented with the contents. The desire to see this happen in more than one grade level” (Interview 2, 2016). As the Lower School Director, Nicole saw value in content integration and the individualized support; she had a desire to see this change spread across our school. Within the research site, the building administration was available and supported the teachers over the course of the implementation phase of content integration.

After the analysis of the data in our study we recognized that the group was sharing a vision that included teamwork and collaboration. The participants wanted to know what was going on in one another’s HUB. Data showed that participants were eager to support one another in order to increase their collaboration (see Chapter Four pp. 105-106). As the innovation was concluding, one of the informants (Katie) was eager to lay out the yearlong plan for the upcoming year to ensure she would know how to best support the science and social studies HUB through her mathematics HUB. As the researcher and part of the administrative team at RCS, this gave me the opportunity to begin planning for in the change in the upcoming year at RCS. Alongside the participants, I had a passion for content integration to be sustained at RCS. This encouraged me, to provide support for participants undergoing a change initiative. As noted in Chapter Four (pp. 103-116), the themes (roadblocks) that arose throughout the implementation
included appropriate resources. As our CEO has stated, “I cannot complain about achievement, if I do not give the teachers what they need to teach kids” (personal communication). During the implementation the process of pulling together resources to enhance teaching and learning was vital.

As stated in Breztna et al., (2015) and Hord and Roussin (2013) the continuous monitoring of progress was essential for teachers to sustain an innovation. This was attained. Through multiple observations and continuous communication by e-mail or simply passing in the hallway, the progress of the implementation was discussed. My co-researcher and I had a desire to see a change happen within our school. Through the visions of a creative 2nd-grade team and a supportive administration the assistance was ongoing and a culture of change was supported. Aforementioned benefits allowed for an innovation to change that support is provided to teachers that directly aligned to the teacher’s individual areas of need through a purposeful plan of support.

Traditional professional development would not have supported this implementation in the same fashion. As the participants were actively engaged in infusing English-Language Arts into their HUBs, support would have been minimal. At the conclusion of a one-stop-shop professional development sessions, participants would have been sent back into their setting to implement on their own. Through on-site, ongoing, and individualized professional develop the participants were not alone. When questions arose, when roadblocks surfaced, or when frustration hit the support from administration was available.

Research Question 2

How did on-site, ongoing, and individualized professional development impact teachers’ daily practice?
As mentioned in Chapter Two (pp. 27) literature in the field suggested that on-site, ongoing, and individualized professional development practices constitute a path for successful impact in teachers practice. Croft et al. (2010), discussed 12 models of professional development outlined in Chapter Two. These models included: action research, case discussions, coaching, critical friends groups, data teams/assessment development, examining student work, implementing individual growth/learning plans, lesson study, mentoring, portfolios, professional learning communities, and study groups. Not all 12 models were implemented, but multiple methods were established and implemented throughout the innovation, thus showing that not one method of professional development was appropriate or useful for all participants. During individual sessions with participants, my co-researcher and I worked on assessment development, reviewed lessons, provided mentorship, developed learning communities, and examined student work during the sessions. These methods were not labeled during the study. In order to address each need, the individual sessions were tailored to cover the specific concerns of each participant. For example, one of the informants, Lindy, needed support in lesson development and Melissa needed support through assessment building. The individual nature of the innovation allowed my co-researcher and me to develop a session to meet these particular needs. Just as each participant’s needs were unique the impact the impacts on the teacher’s daily practice was unique. Overall impacts recognized by teachers included the following:

Impact #1. Through immediate feedback and individualized support the teachers’ abilities to implement the strategy increased over the duration of the study.

Impact #2. Through individual sessions, appropriately aligned resources were gathered to enhance current curriculum within individual HUBS or collaboratively shared amongst multiple HUBS.
Impact #3. The collaboration provided much of the support needed to implement the strategy more effectively.

On-site PD allowed for benefits that would not traditionally occur when provided mass professional development. Through providing a resource that directly aligned to the current curriculum allowed the participants to implement the strategy more completely. The wait time for collaboration was minimal. All participants and researchers were within the same building on a daily basis. Oftentimes the value of a five-minute conversation in the hallway was extraordinary. When questions arise that go unanswered or unsupported this opens up the opportunity for doubt and insecurities to filter into the innovation. The ongoing support limited the time for frustration, insecurities, and wonder to filter into the team of participants. As Darling-Hammond et al. (2017) recognized, there are seven characteristics to effective professional development. These characteristics were incorporated into the individually planned professional development sessions for participants.

The professional development provided was content focused. Every lesson modeled, observation conducted, or assessment planned was tied directly to the current curriculum. Participants were involved with active learning. The learning was taking place with their own classroom, with their own students, and with their own resources. Collaboration was essential for the participants within their team and the researchers. Utilizing of both researchers, modeling was provided and delivered within the participant’s classroom. The use of modeling did not stop there. After the lessons were modeled, we gave the participant an opportunity to reteach the modeled lessons as we observed and provided support and feedback. Through support and feedback, my hope was that the participants never felt alone. The feedback for this strategy was positive. Participants wanted to begin planning for the upcoming year, eager to
change at the drop of a hat, and anxious for more resources to enhance their teaching and learning. The final component of Darling-Hammond et al.’s (2017) list of characteristics of effective professional development is sustained duration. The study was conducted over a four-month period. Over the course of the four months the participants remained engaged and gained confidence in specific areas. The administrative team’s desire at the research site was to continue the innovation as a part of the culture at RCS.

**Summary of Goals of Study**

At the beginning of the study, goals were established to clearly define the purpose of the study. Personally, my goal was to build a community of teachers that had a willingness to embrace change due to the assurance that support would be provided. Over the course of the innovation ongoing support was provided during individual sessions, communication via e-mails, or a brief conversation in the hallway. Support was given through lesson planning, resource banks, and assessment building. The ongoing support was provided freely due to the benefits of being on-site with the participants.

As part of the administrative team at RCS, my practical goal for the study was to plan for on-site, ongoing, and individualized professional development based upon the individual needs of the participants in hopes of increasing their ability to effectively implement content integration. Comments and ratings guided the development and planning process for tailored professional development. As no two teachers entered the innovation the same, the process for support was diversified, and the benefits and impacts were individually aligned to each participant. Finally, my intellectual goal for the study was to develop a model addressing ways in which to implement on-site, ongoing, and individualized professional development for teachers. As soon to be discussed in the limitations of the study, the model was purposefully designed for
a particular setting and number of participants. With eight participants, a particular innovation, and ability to be on-site with the teachers allowed for this model to be designed. To replicate this process the following plan is outlined:

1. Identify individual areas of need or concern for each participant.
2. Collaboratively establish a plan of provided PD for participant to address individual concerns.
3. Maintain open communication with participants throughout the process via interview, e-mails, individual work session, or informal conversations.
4. Provide continuous supports throughout the process.
5. Reassess needs of participants.
6. Keep track of the actions taken and implement a solid data gathering, analysis strategy to make sense of the process.

As the implementation of any new initiative, the cycle will continue. The needs of our teachers continued to evolve. Over the course of the implementation of content integration, Melissa began with needing assurance of how the initiative would impact her students and transition more into a need for resources to fully implement. As the needs shift, the models of professional development will changed too. Figure 5.1 displays the bottom-up model for on-site, ongoing, and individualized professional development. The examples from practice represent that of the lessons learned and surrounding each step of the process. In order to implement, you must first establish the need. The cycle continues to evolve as support is provided and needs begin to shift.
Limitations of Study

The research tradition employed was case study (Stake, 1995). The purpose was to provide an in-depth understanding of the case of on-site, ongoing, and individualized professional development at Rural Charter School. The case was purposefully situated within a small group of participants in a particular setting. The use of a small number of participants limits the generalizability of the study are not intended to be applied to a larger population. In
providing individualized support for teachers, getting to know the participants on an individual level was essential. Through this process I was able to have a deep understanding of the needs and concerns of each of the eight participants. Weekly or daily communication provided allowed us to complete the journey together. Within a larger scale, the reality of getting to know all the participants on that level may not occur. The idea of strictly applying this model on a large scale would not be realistic, although modifications to the plan could potentially lead to application on a larger scale.

Ratings and comments provided required the participants to maintain open and honest communication. This provided a limitation due to the fact that at times participants may hold back with their responses or not openly share all concerns through the implementation of any new initiative.

Although size and open communication can be seen as a limitation for the study, I personally believe size was responsible for much of the success. Within any educational institution, if the leaders can identify a particular need of the institution, a group in which to charge with the change, and provide that group individualized support, I believe the initiative can and will be successful.

Implications for Future Practice

Throughout the innovation, individualized support was provided to teachers based upon their results from the TSES (Tschannen-Moran & Hoy, 2001) and the comments provided within the interview sessions. Professional development was then provided to meet the needs of each teacher during the implementation of content integration. One recommendation for future practice would be to continue this model across multiple settings. Currently, this model was solely implemented within the 2nd-grade team of teachers at RCS. In speaking with the
administrative team, the continuation of the HUB system at RCS is ongoing. The Lower School Director is actively implementing this system and providing the supports needed to see this model become a success in multiple grade levels.

In reference to the model of providing on-site, ongoing, and individualized support for teachers while undergoing the implementation of a new initiative, I would recommend taking this model and implementing it with a new initiative across a new setting. As discussed in the limitations of study, I would apply this model to a small sample size. This model was not intended to be applied on a large scale. Within RCS, supporting teachers as they undergo any change in their practice is crucial. Whether it is supporting new teachers as they begin their first year of teaching or a teacher that is changing content or grade level for the first time, support is essential.

The model of on-site, ongoing, and individualized PD was designed specifically for a particular setting and number of participants. Within education, oftentimes, school-wide initiatives are required of a much larger number of participants with minimal “coaches” or support staff to help in supporting them. Personally, I believe that this model can be modified to meet the needs of a larger population. Even with a group of eight participants, there were commonalities amongst them. When addressing the need, I was able to provide one-on-one support. When working with a larger population (e.g. 100 teachers), commonalities may arise within 10-20 participants. Then the professional development sessions can be tailored to that group instead of that one participant. The key is determining what do the teachers need and recognizing they do not all need the same thing. Some teachers are savvy with technology and professional development provided through technology has the potential to meet mass numbers of teachers one at a time. Again, the key is determining the need. Do the participants need to see
the initiative in action? Do they need updated and relatable resources? Do they need time to collaborate with one another? Once these are established, the leader’s job shifts to providing *purposeful* professional development that has the *potential* to benefit and impact a teacher’s practice.

**Conclusion**

Within Rural Charter School change is ongoing. As a team of visionaries, we are constantly looking for ways in which to better our educational practice and the education provided to our students. Over the course of my twelve years of teaching, I have never taught in a place quite like RCS. As RCS is a high achieving academic institute, most educators would perceive it as change is not needed; do not fix what is not broken. Here at RCS that philosophical opinion is null and void. We are constantly seeking ways to better ourselves. Results of this case study demonstrate a positive outcome.

The model of implementing on-site, ongoing, and individualized professional development has its place and holds value at RCS. There are still times in which our school will send teachers to a workshop or bring an expert into our building to revive or renew a particular practice, but more times than not our first approach is how can we support our teachers on-site. As our school continues to grow, support is being added for our teachers and the expertise of teachers across the campus is being utilized. RCS understands that no two teachers are alike and no two teachers have the same need. As we challenge our teachers to differentiate for their students, we must stand behind what we preach and provide differentiation for our teachers as well.
References

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*Berckemeyer Consulting Group.*


https://digitalcommons.kennesaw.edu/educleaddoc_etd/11


doi:10.1177/0734282915593835


http://dx.doi.org/10.14221/ajte.2013v38n10.8


ON-SITE, ONGOING, AND INDIVIDUALIZED PD


Appendix A

Interview Protocol

Focus Group Interview Questions
Ashley Funderburke and Jody Worth
2016 IRB Exemption Request Document

1. What do you see as your strengths through this process?
2. What do you see as your weaknesses through this process?
3. What is your target area?
4. What is one area of change you have made? Is there more than one area?
5. How are the students responding to the changes being made within your content delivery?
Appendix B

Teacher Sense of Efficacy Scale

<table>
<thead>
<tr>
<th>Teacher Beliefs</th>
<th>How much can you do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much can you do to get through to the most difficult students??</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>2. How much can you do to help your students think critically?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>3. How much can you do to control disruptive behavior in the classroom?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>4. How much can you do to motivate students who show low interest in school work?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>5. To what extent can you make your expectations clear about student behavior?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>6. How much can you do to help students believe they can do well in school work?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>7. How well can you respond to difficult questions from your students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>8. How well can you establish routines to keep activities running smoothly?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>9. How much can you do to help your students value learning?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>10. How much can you help your students understand what you have taught?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>11. To what extent can you gauge good questions for your students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>12. How much can you do to foster student creativity?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>13. How much can you do to get children to follow classroom rules?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>14. How much can you do to improve the understanding of a student who is failing?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>15. How much can you do to calm a student who is disruptive or noisy?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>16. How well can you establish a classroom management system with each group of students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>17. How much can you do to adjust your lessons to the proper level for individual students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>18. How much can you use a variety of assessment strategies?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>19. How well can you keep a low problem students from ruining an entire lesson?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>20. To what extent can you provide an alternative explanation or example when students are confused?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>21. How well can you respond to defiant students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>22. How much can you assist families in helping their children do well in school?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>23. How well can you implement alternative strategies in your classroom?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>24. How well can you provide appropriate challenges for very capable students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
</tbody>
</table>
Appendix C

E-mail Correspondence about Resources

Ashley Funderburke has invited you to **contribute** to the following shared folder:

- **2nd Grade Resources**

Here are a few things I pulled this weekend. I will come up in a minute to share with you all.

Click here to learn more.
Appendix D

E-mail Correspondence about Observation and Feedback

Tomorrow
3 messages

To: Ashley Funderburke <ashley.funderburke@

Are you meeting with me or observing?

---

Ashley Funderburke <ashley.funderburke@

Meeting to discuss observation
[Quoted text hidden]
---

Ashley Funderburke, Ed.S

---

To: Ashley Funderburke <ashley.funderburke@

Ok. See you at 8:30! I'm so interested to hear what you have to say! Remember good or bad, I want it!
[Quoted text hidden]
Appendix E

IRB

Kennesaw State University
Institutional Review Board

Exemption Request for Research with Human Participants

(Prior to submission of this form, review the IRB Exemption Screening Checklist at http://ireson.kennesaw.edu/)

1. Project Identification

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Integrating Social Studies and Science in the K-3 Language Arts and Math Curricula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Investigator (PI):</td>
<td>Ashley Funderburke and Jody Worth</td>
</tr>
<tr>
<td>PI Department:</td>
<td>Board of Governors</td>
</tr>
<tr>
<td>PI Phone:</td>
<td>706.454.1562</td>
</tr>
<tr>
<td>PI Email:</td>
<td></td>
</tr>
<tr>
<td>KSU Co-Investigators:</td>
<td>Dr. Kim Gray, Dr. Daphne Hubbard, Dr. Susan Stockdale</td>
</tr>
<tr>
<td>Non-KSU Affiliated Co-Investigators:</td>
<td>Dr. Karen DiBela</td>
</tr>
<tr>
<td>Faculty Advisors:</td>
<td>Dr. Daphne Hubbard and Dr. Kim Gray</td>
</tr>
<tr>
<td>Faculty Advisor Department:</td>
<td>Secondary and Middle Grades Education</td>
</tr>
<tr>
<td>Faculty Advisor Phone:</td>
<td>470-578-6314 (Hubbard) and 470-578-2250 (Gray)</td>
</tr>
<tr>
<td>Faculty Advisor Email:</td>
<td><a href="mailto:dhubbar9@kennesaw.edu">dhubbar9@kennesaw.edu</a> <a href="mailto:kgray@kennesaw.edu">kgray@kennesaw.edu</a></td>
</tr>
<tr>
<td>Proposed Study Dates:</td>
<td>February 2016 – June 2017</td>
</tr>
<tr>
<td>Name of External Funding Agency:</td>
<td>N/A</td>
</tr>
<tr>
<td>Funding Agency’s Deadline:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

2. Mark each category describing the proposed research:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Educational Purposes. Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods. Research is not FDA regulated and does not involve prisoners. Submit questionnaire(s), surveys and consent documents.</td>
</tr>
<tr>
<td>2</td>
<td>Educational Tests, Surveys, Interviews, Public Observation. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior; unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation. If research involves children as participants, procedures are limited to educational tests and observation of public behavior where investigators do not participate in the activities being observed. Research is not FDA regulated and does not involve prisoners. Submit questionnaire(s), surveys, and consent documents.</td>
</tr>
<tr>
<td>3</td>
<td>Elective or Public Officials. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under category (2), if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter. Research is not FDA regulated and does not involve prisoners. Submit questionnaire(s), surveys and consent documents.</td>
</tr>
</tbody>
</table>
### Research with Existing Data

Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. Research is not FDA regulated and does not involve prisoners. No additional documentation needs to be submitted.

### Public Benefit or Service Programs

Research and demonstration projects which are conducted by or subject to the approval of federal department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs. (This category may be used for federal programs only.)

### Taste Tests

Taste and food quality evaluation and consumer acceptance studies. (i) If wholesome foods without additives are consumed; or (ii) If foods are consumed that contain a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe by the FDA or approved by the EPA or the FSIS of the USDA. The research does not involve prisoners as participants. Submit consent documents.

### 3. Briefly describe the intent of the proposed research.

Considering rigorous, literacy-based state standards and standardized test data that demonstrate declines in science and social studies scores for grades 4-12, our research will focus on creating a professional learning community and preparing professional development for 2nd grade teachers to facilitate the integration of social studies and science content into the language arts and math curricula, which are the two central focus areas for 2nd grade instruction. Through this study, we will closely follow the professional development and curriculum integration journey of a second grade team. The results of this study may lead to further examination and redefinition of the curriculum for grades K-3 in an effort to successfully integrate social studies and science content into the language arts and math curricula to build student background knowledge in social studies and science and to stem a decline in standardized test scores in social studies and science in grades 4-12. Second grade teachers will participate in this study voluntarily. To gather baseline data and to help plan, teachers will complete two, pre-study surveys, Stages of Concern Questionnaire and Teachers’ Sense of Efficacy Scale, that will guide the planning process for creating the professional learning communities and the content for professional development within the PLCs. Following the creation of the PLCs and implementation of the professional development, teachers will support each other in their efforts of integrating social studies and science content into the language arts and math curricula through peer observation and coaching. To finalize the study, teachers will complete two, post-study surveys, Stages of Concern Questionnaire and Teachers’ Sense of Efficacy Scale, and participate in a focus group interview to gather data not captured on the surveys. The results of this study may lead to further examination and redefinition of the curriculum for grades K-3 in an effort to successfully integrate social studies and science content into the language arts and math curricula to build student background knowledge in social studies and science and to stem a decline in standardized test scores in social studies and science in grades 4-12. The surveys and focus group interview questions are attached.

### 4. Describe how participants, data, and specimens will be selected.

Participation in completing the four surveys and focus group interview is completely voluntary among the faculty at during spring and fall semesters in 2016.

### 5. Does the research involve deception?

- ☐ Yes  ✗ No

### 6. Describe why research procedures will not cause a participant either physical or psychological discomfort or be perceived as harassment above and beyond what the person would experience in daily life.

Participation is in the study is voluntary and does not extend beyond the normal
solicitation of teacher input and opinions in a regular, educational setting. Participation in the study is voluntary and anonymous.

7. Describe provisions to maintain the confidentiality and security of data both during and after study completion. If necessary, pseudonyms will be used and the code sheet will be stored on an external hard drive and secured by passcode.

8. Describe provisions to protect privacy of participants (e.g., interviews will be conducted in a private area of classroom; individuals will not be publicly identified, etc. The use of pseudonyms allows additional assurance that individuals will not be publicly identified and allows the researchers to track and measure growth or change in participant stages of concern and levels of efficacy in integrating social studies and science content into the standard language arts and math curricula for grade 2.

9. Will the research involve obtaining data through intervention or interaction with participants? (e.g., physical procedures, manipulations of participants or their environment, communication or interpersonal contact between researcher and participant, including interviews, surveys, focus groups, online surveys, etc.) ☒Yes ☐No

a. What age groups will be included? Teachers participating in the survey range in age from 22-66.
   *Within the consent document, include a statement of age groups to be included in the study.

b. Describe the consent/assent process to be used. The teachers voluntarily participating in the survey who range in age from 22-66 will be asked to complete the attached Participant Consent form.

10. Will an online survey be utilized in this study? ☐Yes ☒No
   *If yes, use the Online Survey Cover Letter template at [http://www.kennesaw.edu/irb/forms.html](http://www.kennesaw.edu/irb/forms.html) - consentdocs

11. List all survey instruments to be used (pre-/post-tests, online surveys, interview questionnaires, focus group questionnaires, etc.). Submit these documents along with this form. Stages of Concern Questionnaire, Teachers' Sense of Efficacy Scale, and focus group interview questions.

Submit all survey instruments, consent documentation, etc., with this form to irb@kennesaw.edu. Be advised that if your study cannot be granted an exemption by the IRB, you may be directed to submit the IRB Approval Request form to assist the board with further review of your study. This will require additional processing and review time. Direct all questions to the IRB at (470) 578-2268 or irb@kennesaw.edu.
Appendix F

Approval from RCS

August 2, 2016

Dear Institutional Review Board:

The purpose of this letter is to inform you that I give Jody Worth and Ashley Funderburke permission on the behalf of the Board to conduct the research titled Study # 16-344: Integrating Social Studies and Science in the K-3 Language Arts and Math Curricula at This also serves as assurance that this school complies with requirements of the Family Educational Rights and Privacy Act (FERPA).

An approved copy of the Exemption Request for Research with Human Participants provided by Kennesaw State University’s Institutional Review Board was presented on August 2, 2016 at Board of Governor’s meeting.

Sincerely,
Appendix G

Participant Permission Form

Consent for Voluntary Participation in Integrating Social Studies and Science in the K-3 Language Arts and Math Curricula

I, __________________________, submit that I am between age 22 and 66 and agree to participate in the research project entitled “Integrating Social Studies and Science in the K-3 Language Arts and Math Curricula.” I understand that participation in the pre-study and post-study surveys and focus group interviews is completely voluntary, and I may withdraw consent at any time without penalty. The project is being conducted by Ashley Reeder and Tacy Worth, doctoral candidates at Kennesaw State University, under the direct supervision of Dr. Daphne Hubbard and Dr. Kimberly Gray, in the Department of Secondary and Middle Grades Education in the College of Education at Kennesaw State University. For further information about this project, contact Dr. Hubbard at (470) 578-2384 or dhubber2@kennesaw.edu, or Dr. Kimberly Gray at (470) 578-2250 or kim.greene@kennesaw.edu. Research at Kennesaw State University that involves human participants is carried out under the oversight of an Institutional Review Board. Questions or problems regarding these activities should be addressed to the Institutional Review Board, Kennesaw State University, 585 Cobb Avenue, KH3403, Kennesaw, GA 30144-5591, (470) 578-2268.

The following points have been explained to me:

1. The purpose of this research is to generate knowledge that may lead to further examination and redefinition of the curriculum for grades K-3 in an effort to successfully integrate social studies and science content into the language arts and math curricula to build student background knowledge in social studies and science and to stem a decline in standardized test scores in social studies and science in grades 4-12.

2. I may expect to benefit from the research by gaining knowledge, experience, and feedback to improve my skills in integrating social studies and science content into the language arts and math curricula to build student background knowledge in social studies and science and to stem a decline in standardized test scores in social studies and science in grades 4-12.

3. The procedures are as follows: I will be asked to complete two pre-study surveys; two, post-study surveys; and participate in a focus group interview following the study.

4. Participation in this research entails no known risks. No discomforts or stresses are expected as a result of this research.

5. The results of this participation will be confidential and will not be released in any individually identifiable form without the prior consent of the participant unless required by law. While research is underway, all documents and data containing my information will be stored in a locked cabinet at __________________________. All data will be destroyed within three years of research conclusion.

Signature of Participant Date

Signatures of Investigators Date

PLEASE SIGN BOTH COPIES, KEEP ONE AND RETURN THE OTHER TO THE INVESTIGATOR

Research at Kennesaw State University that involves human participants is carried out under the oversight of an Institutional Review Board. Questions or problems regarding these activities should be addressed to the Institutional Review Board, Kennesaw State University, 585 Cobb Avenue, KH3403, Kennesaw, GA 30144-5591, (470) 578-2268.
Appendix H

Permission to Use TSES

William & Mary
School of Education

Megan Tschanen-Moran, PhD
Professor of Educational Leadership

August 4, 2016

Ashley,

You have my permission to use the Teacher Sense of Efficacy Scale (formerly called the Ohio State Teacher Sense of Efficacy Scale), which I developed with Anita Woolfolk Hoy, in your research. You can find a copy of the measure and scoring directions on my web site at http://wmpeople.wm.edu/site/page/naxsch . Please use the following as the proper citation:


I will also attach directions you can follow to access my password protected web site, where you can find the supporting references for this measure as well as other articles I have written on this and related topics.

I would love to receive a brief summary of your results.

All the best,

Megan Tschanen-Moran
The College of William and Mary
School of Education
Appendix I

Detailed Professional Development Provided to Individual Participants

<table>
<thead>
<tr>
<th>Date</th>
<th>Individualized Professional Development</th>
<th>Session Summary</th>
<th>Themes</th>
<th>Participants Involved</th>
<th>Role of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, August 22, 2016</td>
<td>Whole-Group (8 participants within the 2nd Grade Team at RCS) Informational</td>
<td>Administration of TSES Permission to take part in study Overview of Content Integration through the HUB system</td>
<td>Relevance</td>
<td>ALL</td>
<td></td>
</tr>
<tr>
<td>Monday, August 29, 2016</td>
<td>Whole-Group Informational</td>
<td>Overview on how to utilize a science/social studies textbook as a reading basal. Examples of integrated lessons provided on the following topics: <em>Matter (Science)</em> <em>Wordly Wise</em> (Vocabulary) pairing of text (Science &amp; Social Studies) Discussion of teacher need</td>
<td>Resources Relevance to Instruction</td>
<td>ALL</td>
<td></td>
</tr>
<tr>
<td>Tuesday, August 30, 2016</td>
<td>Individual Training Session</td>
<td>Co-researcher and I planned with individual teacher by pulling resources for integration of social studies and ELA. Reviewed content leveled readers to implement in Inquiry HUB. Collaboratively worked on scheduling of Inquiry HUB.</td>
<td>Resource Scheduling &amp; Logistics</td>
<td>Lindy</td>
<td>Inquiry HUB providing support and infusion of Social Studies &amp; Science</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Description</td>
<td>Relevance to Instruction</td>
<td>Facilitator</td>
<td>Other Information</td>
</tr>
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<tr>
<td>Thursday, September 1, 2016</td>
<td>Model-Observe-Feedback</td>
<td>Co-researcher modeled an Integrated Lesson on States of Matter and ELA grammar components while Melissa and I observed. Then Melissa facilitated the lesson to another group. -Matter -context clues -types of sentences -synonyms -parts of speech -sequencing</td>
<td>Becoming a Facilitator</td>
<td>Melissa</td>
<td>Science HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Tuesday, September 6, 2016</td>
<td>Individual Training Session</td>
<td>Planned integrated Lessons with Lindy. Her focus was increasing the depth of knowledge of her questioning. -DOK Levels</td>
<td>Instruction</td>
<td>Lindy</td>
<td>Inquiry HUB providing support and infusion of Social Studies &amp; Science</td>
</tr>
<tr>
<td>Wednesday, September 7, 2016</td>
<td>Individual Training Session</td>
<td>Met w/ Nicole Discussed 2nd grade standards and which HUB is responsible for covering each standard</td>
<td>Instruction</td>
<td>Nicole</td>
<td>Support for HUB integration as Lower School Director</td>
</tr>
<tr>
<td>Thursday, September 8, 2016</td>
<td>Model-Observe-Feedback</td>
<td>Modeled Integrated Lesson on Matter -changes in state of matter -synonyms -math (equations) -prior knowledge</td>
<td>Scheduling &amp; Logistics</td>
<td>Melissa</td>
<td>Science HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Thursday, September 8, 2016</td>
<td>Individual Training Session</td>
<td>Planning meeting with Hailey to discuss resources and how it relates to year-long plan of instruction. -resources for Social Studies through reading -leveled readers -differentiation “reader’s theatre” -review of year-long plan Addressed teacher concerns, since 1st year in HUB format: -Where to start? -Where does fit?</td>
<td>Resources</td>
<td>Hailey</td>
<td>Social Studies HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Date: Thursday, September 8, 2016</td>
<td>Activity: Model-Observable Feedback</td>
<td>Details: My co-researcher observed a science teacher emulating a lesson taught earlier in the day on the following topics of content integration: synonyms, equations, changes in state of matter, hit on Saxon phonics lesson from other HUB, doubling x²</td>
<td>Facilitator: Melissa</td>
<td>PD Category: Science HUB w/ Integration of ELA</td>
<td></td>
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<tr>
<td>Date: Thursday, September 8, 2016</td>
<td>Activity: Observe-Feedback</td>
<td>Details: My co-researcher observed an Inquiry HUB working on poetry with the infusion of phonics. Poetry in Inquiry HUB was connected to historical figures in Social Studies.</td>
<td>Relevance to Instruction: Lindy</td>
<td>PD Category: Inquiry HUB providing support and infusion of Social Studies &amp; Science</td>
<td></td>
</tr>
<tr>
<td>Date: Friday, September 9, 2016</td>
<td>Activity: Individual Training Session</td>
<td>Details: Met with Hailey to discuss scheduling and logistics of the Social Studies HUB.</td>
<td>Scheduling &amp; Logistics: Hailey</td>
<td>PD Category: Social Studies HUB w/ Integration of ELA</td>
<td></td>
</tr>
<tr>
<td>Date: Monday, September 12, 2016</td>
<td>Activity: Resource Usage &amp; Bank</td>
<td>Details: Delivery of Resources pulled for integration of leveled reading passages into the Science and Social Studies Curriculum. Resource Folder established and shared with all participants. Heat &amp; Light, Life Cycles, Differentiated Reading passages on 2nd grade science and social studies year-long topics.</td>
<td>PD Category: Resources</td>
<td>PD Category: ALL</td>
<td></td>
</tr>
<tr>
<td>Date: Wednesday, September 14, 2016</td>
<td>Activity: Observe-Feedback</td>
<td>Details: Conducted observation of Autumn &amp; Hailey within the Social Studies HUB. Teachers invited me to observe for feedback on implementation of content integration and monitoring of student engagement, throughout a centers based format.</td>
<td>Effect on Students: Autumn &amp; Hailey</td>
<td>PD Category: Social Studies HUB w/ Integration of ELA-Lead Teacher and Support Teacher</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Details</td>
<td>Relevance to Instruction</td>
<td>Resources</td>
<td>Team</td>
</tr>
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<tr>
<td>Friday, September 16, 2016</td>
<td>Observe-Feedback</td>
<td>Follow-up of observation on Wednesday, suggestions and feedback were provided on the following topics: -Sticky notes w/ independent reading -how to engage all students -how to incorporate fluency -nonfiction vs fiction</td>
<td>Effect on Students</td>
<td>Autumn &amp; Hailey</td>
<td>Social Studies HUB w/ Integration of ELA-Lead Teacher and Support Teacher</td>
</tr>
<tr>
<td>Monday, September 26, 2016</td>
<td>Resource Usage &amp; Bank</td>
<td>Shared resources to all team members through Google Drive Folder. Shared resources on water cycle for Melissa Shared Creek &amp; Cherokee Indian Resource with Hailey through e-mail.</td>
<td>Resources</td>
<td>Hailey, Melissa &amp; Team</td>
<td>Social Studies HUB w/ Integration of ELA-Lead Teacher and Support Teacher</td>
</tr>
<tr>
<td>Wednesday, September 28, 2016</td>
<td>Resource Usage &amp; Bank</td>
<td>Resources added to shared Google Drive to include: -Cesar Chavez differentiated reading passages.</td>
<td>Resources</td>
<td>Hailey</td>
<td>Social Studies HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Friday, September 30, 2016</td>
<td>Resource Usage &amp; Bank</td>
<td>Resources shared with Hailey on upcoming unit on Creek &amp; Cherokee Indians.</td>
<td>Resources</td>
<td>Hailey</td>
<td>Social Studies HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Monday, October 3, 2016</td>
<td>Individual Training Session</td>
<td>Both researchers met with Melissa to discuss the following: -review assessments -shared resources -discussed integration of ELA (parts of speech w/ science topics)</td>
<td>Resources</td>
<td>Melissa</td>
<td>Science HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Tuesday, October 4, 2016</td>
<td>Individual Training Session</td>
<td>Both researchers met with Hailey to discuss the following: -review assessments -westward expansion -review shared resources -how to use RAZ kids (reading supplement using content specific books) -how to differentiate reading</td>
<td>Resources</td>
<td>Hailey</td>
<td>Social Studies HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Date</td>
<td>Type</td>
<td>Description</td>
<td>Date</td>
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<tr>
<td>Monday, October 18, 2016</td>
<td>Whole-Group Informational</td>
<td>Meeting with 2nd Grade Team to discuss the following: - assessments - upcoming content - review topics and resources for simple machines &amp; westward expansion - how to incorporate research within HUBs - how to incorporate more writing within HUBs</td>
<td>Schedule &amp; Logistics</td>
<td>ALL</td>
<td></td>
</tr>
<tr>
<td>Thursday, October 20, 2016</td>
<td>Resource Usage &amp; Bank</td>
<td>Resources sent to Social Studies HUB</td>
<td>Resources</td>
<td>Melissa</td>
<td>Social Studies HUB w/ Integration of ELA</td>
</tr>
<tr>
<td>Thursday, November 3, 2016</td>
<td>Resource Usage &amp; Bank</td>
<td>Shared resources via e-mail to address content integration across math and reading. Shared with Melissa, Hailey, and Lindy but for utilization through Math HUB with Katie, Autumn, and Amanda.</td>
<td>Resources Relevance to Instruction</td>
<td>Katie, Autumn &amp; Amanda</td>
<td>Math HUB-Lead Teacher and two Support Teachers</td>
</tr>
<tr>
<td>Monday, November 14, 2016</td>
<td>Resource Usage &amp; Bank</td>
<td>Resources shared for upcoming Social Studies unit on War of 1812 that included reading passages, graphic organizers, and comprehension task.</td>
<td>Resources</td>
<td>Melissa Lindy, Autumn, &amp; Hailey</td>
<td>Science, Social Studies, and Inquiry HUB-Lead Teacher and support teacher Social Studies HUB</td>
</tr>
<tr>
<td>Tuesday, December 8, 2016</td>
<td>Resource Usage &amp; Bank</td>
<td>Resources shared with Science HUB on solar system covering the following ELA standards: reading comprehension, main idea, and supporting details.</td>
<td>Resources</td>
<td>Hailey, Melissa, Amanda, &amp; Lindy</td>
<td>Science, Social Studies, and Inquiry HUB-Lead Teacher and support teacher Social Studies HUB</td>
</tr>
<tr>
<td>Week of December 9, 2016</td>
<td></td>
<td>Final administration of TSES was individually handed out and collected.</td>
<td>Resources</td>
<td>ALL</td>
<td></td>
</tr>
</tbody>
</table>
Appendix J

Detailed Description of Professional Development Methods Provided

Whole Group Informational Sessions: An overview of content integration and the study was given at the initial whole-group informational session. My co-researcher and I, discussed the literature explaining the importance of the science and social studies content in elementary grades. We gave an overview of the scale (TSES) and addressed concerns of the group regarding their participation in the study. Throughout the implementation of content integration two additional whole-group informational sessions were held for participants. During the second whole-group informational session, my co-researcher and I guided the participants through how to utilize their social studies and science textbooks as a reading basal, allowing the participants the chance to view this text as reading material. In addition, we worked with other resources and placed resources within their appropriate unit of study, not just doing something because we have it, but being purposeful when things are taught and with which material we pair together. Finally, we ended the meeting with participants sharing their needs. At that point, Lindy pulled out her calendar to go ahead and schedule her first individual sessions, showing eagerness to begin working. At the midpoint of the study, we did the final whole-group informational sessions where we collectively worked on assessments. Prior to this, individual sessions were held with both Lindy and Melissa to work on building purposeful assessments for students.

At the conclusion of the final whole-group informational sessions, the team mapped out upcoming units of study and reviewed current resources. The team discussed how to incorporate more writing across all content areas. Finally, the team developed research topics for students to complete within the Inquiry HUB. A few research topics included history figures (social studies), simple machines (science), and famous inventors (science). These research topics were
purposefully selected to support and enhance science and social studies content. Over the course of the study, three whole-group informational sessions were held, lasting approximately forty-five minutes each to support the group as a whole.

**Model-Observable-Feedback:** Through this study my co-researcher and I planned and modeled lessons for the participants. This method supported that of Croft et al. (2010), of lesson studies. The model-observe-feedback method allowed the researchers to prepare a lesson to demonstrate, while other teachers observed. My co-researcher would demonstrate the lesson, while the participant and I would observe and discuss the findings. After the initial modeling of the lesson, the participant would then redeliver the lesson to the next group of students, while my co-researcher and I would observe. After both lessons had been taught, we would all meet for a feedback session.

Participants throughout the study would invite us into their classrooms to observe a lesson being taught. The number of observations varied per participant, and not all participants required this type of individualized professional development. Throughout the study, four out of the eight participants were provided professional development through the model-observe-feedback model, consisting of a total of six sessions. The observations were informal and did not follow a particular protocol. We collected field notes that included the following topics: instructional strategies, content coverage, student engagement, classroom management, and overall effectiveness. These observations were strictly for the study and were not used in any way to evaluate the teacher on state performance indicators. After the observation was completed, the participant and researchers would sit down and discuss the findings and provided feedback to the participant. Each follow-up session led to further investigation on how the infusion of content and reading could be done more effectively.
**Resource Usage and Bank:** To address the individual concern of locating appropriate leveled resources for the content area subjects, the development of a shared resource bank was created. Through the use of a Google Drive Folder, I created a resource bank for teachers that contained science and social studies resources that were integrated with the ELA standards.

![Google Drive Folder with Shared Resources]

Visual representation of Google Drive with shared resources for content integration.

In addition to this, participants would email weekly, monthly, or by upcoming units for me to help provide the needed resources. This resource was shared with all participants in the study.

![Participant Email Requesting Help]

Participant email requesting help in locating resources for upcoming units in Social Studies and ELA HUB.

**Individual training session:** In order to truly change an instructional delivery method, educators must also address the assessment portion of teaching and learning. Through the initial whole-group professional development session, the need to gain a deeper understanding of DOK levels (Depth of Knowledge) and assessment building was established by individual participants. Over the course of the study, individual participants requested sessions with my co-researcher and I. Throughout the study, four out of eight participants took part in individual training
sessions for a total of seven individual sessions. As a group, we would address the concerns based upon the interviews, scales, or informal conversations. As previously stated, the topics for the individual sessions consisted of the following: pulling resources for integration of science and social studies with ELA, scheduling/logistics of the HUBs, planning DOK levels (questioning strategies), addressing content coverage for the HUBs, reviewing reading passages that covered science and social studies content, reviewing assessments, and how to best utilize resources to maximize student engagement. The sessions were informal and participants were encouraged to communicate openly. My co-researcher and I were there to support in any manner needed. Appendix I provide a detailed table of the types of individualized professional development that was provided, the purpose of the professional development provided, the participants involved, and each participant’s role within the study. The dates given for each professional development session serve as a breakdown of the timeline of the five month study.
Appendix K

Network of Atlas.ti Project