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**EXPLORING STUDENT ENGAGEMENT IN  
KINDERGARTEN LITERACY CENTERS**

by

Bryna Wiens

A capstone submitted in partial fulfillment of the requirements  
for the degree of Master of Arts in Teaching.

Hamline University

Saint Paul, Minnesota

March 2020

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## DEDICATION

To all of my teachers, from my parents to my professors and even my kindergarten students, thank you for guiding me to become a lifelong learner and helping me become a better teacher, learner and person each and every day. A special thank you to my Capstone Committee for your guidance and feedback. You pushed me to ask even more questions and helped me complete this research to the best of my ability. Lastly, thank you my husband who has always believed I can do whatever I set my mind to do and who loved and supported me throughout the process.

“The more that you read, the more things you will know.  
The more that you learn, the more places you'll go.”  
– Dr. Seuss

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## CHAPTER 1

### INTRODUCTION

#### Overview of the Chapter

In this introductory chapter, I explain the context of the study as well as the sequence of events that led me to the topic of kindergarten engagement during literacy centers. Literacy centers have become increasingly more common practice in elementary classrooms as a way of engaging the rest of the students in instructional tasks while a teacher directly instructs a small guided-reading group of students (Ford & Opitz, 2008). The team of Kindergarten teachers that I work with and I spent the 2018-2019 school year examining our literacy practices and received feedback from outside consultants to improve how we utilize Fountas & Pinnell's *Literacy Continuum: A Tool for Assessment, Planning, and Teaching* (2017b) to guide our literacy instruction. In order to provide the ideal flexibility in guided-reading groups, we also saw the need for implementing literacy centers in our classrooms. This study takes place during our first year of implementation, the 2019-2020 school year and will examine the following question:

What characteristics of literacy centers correlate with engaged, self-directed learning?

In the following sections, I discuss my path to this research question in my own classroom. I begin by discussing my educational journey with literature. Then I discuss the process of examining the literacy instruction practices at my school in my first year of

teaching at this study's setting. A number of factors led my kindergarten teaching team to choose to implement literacy centers the following year. In that implementation, I wanted to ensure we were maintaining or improving excellent literacy instruction in provided independent literacy centers for our students. Thus, I took the implementation year as an opportunity for action research in my own classroom to examine how students engage with the literacy centers and what literacy skills they develop at those centers. This chapter concludes with a discussion of the stakeholders and potential impacts of the study.

### **My Early Experiences in Literacy and Teaching**

When I was in elementary school, I was never far from a book. In Kindergarten Dr. Seuss was my favorite author, going through more than one copy of *Hop on Pop* because I loved it so much. Visiting the library with my classmates was a favorite, second only to imaginative games of being the teacher or the mother cat as my classmates pretended to be my students or kittens. As I grew older, my favorite books were ones that gave me windows into other life experiences than mine and other ways of making sense of the world around me. Naturally, Judy Blume was my favorite author when I turned ten.

Alongside my growing library of books, I also had a wide collection of notebooks and journals. Every time I went to the bookstore with my mom, I always asked for another notebook. I loved to write. First, I filled the pages with zig-zag lines, then letters put together in ways only I understood at the time. It wasn't long, though, and those letters became words strung together in sentences. I then announced to my mom that I would write a novel, and proudly wrote "Chapter One" in my new journal. "What should my novel be about?" I wondered. I wrote many Chapter Ones, about dogs, about horses,

about best friends. After that I would put it down to play or feel it wasn't good enough to continue. The end of elementary school meant life got busier with after school activities and homework, and my notebooks began to be filled with assignments instead of my novels.

Writing grabbed me with ferocity in high school. Poetry and memoir helped me put the pieces of my heart back together when my parents separated and later divorced. Words helped my childhood come back alive to me, and reminded me of the joy and love that surrounded me. I devoured other's memoirs from Annie Dillard's *An American Childhood* to Richard Rodriguez's *Hunger for Memory*. My teacher supported me in writing a 50-page memoir of my own in my senior year. I self-published 25 copies, and one still sits on my bookshelf today. I picked it up and reread it several times during my coursework to become a teacher. Though it was not specifically about my experiences in school, the words I put on the page took me back to my experiences and mindset during my early education.

Teaching is a second career for me. Despite the fact that when I was in elementary school, the two most common careers I would say would be teacher or author, I went an entirely different direction in my early twenties. However, teaching and working with young children kept calling me back. I believe the experiences students have in their elementary education can be some of the most impactful on their lives. Kindergarten through fifth grade provide the foundation upon which students construct their futures. Not only do students learn how to learn, they discover the art of building friendships, how to work hard, what it feels like to accomplish something that was difficult, how to take risks and learn from mistakes, and how to find their own voice.

As a teacher, it is paramount for me to foster excitement and joy in learning and growing, in my students, as my teachers did for me. It is with that attitude that I endeavored on the journey to examine our literacy instruction practices and work with the kindergarten team to improve and refine the foundational literacy experiences our students have in kindergarten.

### **Examining our Literacy Instruction**

The 2018-2019 school year was my first full-time teaching year at the school in which this study is set, a small private school in the upper midwest that serves kindergarten through twelfth grade. When I arrived, the school had hired a consultant to assist teaching teams in the lower school—kindergarten through fifth grade—in honing our literacy practices and deepening our use of the Fountas & Pinnell *Literacy Continuum* (2017b) in our curricular decisions. In doing this work with the consultant, it was also important that I understood the previous years' literacy curricular and pedagogical practices and contexts.

The lower school operates on a six-day-cycle schedule (see Appendix A). All of the academics for the kindergarten classrooms occur in the morning between 8 am and 12:30 pm. The afternoon consists of lunch, recess, rest and free choice time. Students attend at least one specialist class per day of the six-day cycle. On days one, three, and five, the whole class attends 45 minutes of P.E.. Art, Music, Science, Spanish, and Library specialist classes are attended in half groups for 30-minutes. Each student attends two 30-minute sessions of Art, Music and Science, three 30-minute sessions of Spanish, and one 30-minute session of Library in one six-day cycle. Some half-group, specialist times allow for half-group instruction in home room. At other specialist times, both

kindergarten half groups attend specialist classes so homeroom teachers may prepare lessons and collaborate with the whole kindergarten team or other faculty.

When I arrived at the school, the schedule was designed so students received 45 minutes to two hours of literacy instruction time per day, depending on the day in the six-day cycle. There was time set aside each day for a read-aloud book. Literature Circles and Writing occurred in half groups twice per six-day cycle. A 45-minute whole group language arts block occurred twice a six-day cycle. A half-hour phonics block occurred once a six-day cycle. Each Tuesday and Thursday morning allowed for 45 minutes of instruction time usually focused on language arts, social studies or social emotional learning topics.

Literature Circles were introduced to the kindergarten curriculum seven years prior (in the 2010-2011 school year). They were designed similar to guided reading, though not called as such. Teachers were given access to some book sets and Reading A-Z, an online literacy instruction resource, as reading materials. Those teachers had done the majority of their formal teacher training during the period of Whole Language literacy instruction and had not, at the time, received instruction on pedagogical approaches to small group reading instruction. A few years later, the school decided to model literacy instruction after the Fountas & Pinnell *Literacy Continuum: A Tool for Assessment, Planning, and Teaching* (2017b) and provided the *Continuum* to each teacher to use as a resource in planning, executing and evaluating reading instruction.

We are extremely lucky to have both small class sizes and two full-time teachers in each homeroom. This allows for individualized instruction and a lot of teacher support for students as they are building their skills. In my first year, I reflected on two

observations. First, perseverance on a task is a skill that must be fostered in our classroom. So many other skills from word solving, to multi-step math problems, to future careers require individuals to be able to persevere even when it's hard. Kindergarteners are just beginning to develop this skill and we must be intentional about creating opportunities for growth in perseverance even when our small class sizes often allow us to come in and support whenever the student show signs of struggle or asks for help. Second, student's literacy skills were growing tremendously, but most of the activities were determined by the teacher: the books for literature circles, writing topics, shared readings, read-aloud sessions, and phonics sorts. Though students have the opportunity to make choices in their activities in the afternoon, that time is usually when students play with toys and engage in dramatic play with their peers. I began to wonder where we could fit in more creative time related to literacy for our students while also potentially fostering opportunities for growth in perseverance.

### **Improving our Literacy Instruction Design**

As the kindergarten teaching team discussed implementing more elements of the Fountas and Pinnell *Literacy Continuum* (2017b) into our curriculum, we also examined our schedule. Literature Circles had typically taken place when half of the class was with a specialist and the other half was split among the teachers to do guided reading. Thus, no literacy center work had been utilized because all students have been under direct teacher instruction during guided reading. The limitation of this structure was that we could not quickly change our guided-reading groups because it required an administrative change of our "half/half" groups. This resulted in a month-long lag time between determining a need to switch a student's literacy group and when the switch could actually be made.

To be most effective, guided-reading groups must be dynamic (Clay, 2001). Fountas & Pinnell (2017a) recommend that guided-reading groups be able to flex as frequently as is needed by the student. In a national survey of guided-reading practices, twenty-five percent of teachers reported that they changed their guided-reading groups at least weekly. The majority of teachers reported changing less than once a month or never changing their groupings. The research surrounding guided-reading suggests that groupings must be flexible and fluid. The groups should be constantly evaluated and changed to best meet the needs of each individual student (Fountas & Pinnell, 2017a; Ford & Opitz, 2008). Shanahan (2004) recommends that a minimum of 120 minutes per day in an elementary classroom be devoted literacy instruction, ideally all in one block of time. Shanahan (2004) goes on to recommend that at least 60 minutes of the daily literacy block be utilized for small group reading instruction.

We had to examine our schedule for opportunities to teach guided reading in a whole group setting, so we would have the ability to change groupings based on the needs and skill development of the student, not by the limitations of our schedule. Across each day of the six-day cycle there is an hour block between 11:30 and 12:30 when math is taught. This timing would allow us to meet Shanahan's (2004) recommendation of 60 minutes devoted to small group instruction.

As we considered where to put guided reading in the schedule, we were faced with the same question many teachers have: what will the other students do while guided reading is happening? The literacy consultant that helped us deepen our use of the *Continuum* (Fountas & Pinnell, 2017b) offered centers as a clear choice. However, she offered little in terms of how to best implement centers and ensure quality independent

literacy instruction and student engagement at the centers. To answer the how, I remembered my fellowship experience guiding weekly science center experiences with K-2 students while doing my teacher training and began to research the use of literacy centers in classrooms. I saw potential benefits of using centers not only in our literacy instruction but also in our math instruction. This research and the desire to understand what kinds of centers are engaging for the kindergarten students led me to the purpose of this study.

The kindergarten team agreed to use the hour block before lunch as center time each day. Three of the days utilize that hour for guided reading and literacy centers, and the other three utilize the time for math centers. We can curate centers to target specific skills as well as provide guided reading during literacy center days and small group math instruction during math center days. On days with literacy centers, math instruction will occur earlier in the day in whole or half groups and on days with math centers, literacy instruction will occur earlier in the day (see Appendix B). Research concluding that students perform better in different subjects at different times of day supports this decision to vary the time of subjects along the six-day cycle (Wile & Shouppe, 2011).

This choice has the added benefit of increasing the number of times we meet with guided-reading groups across the six-day cycle. On average in the United States, teachers meet with each guided-reading group three times per week (Ford & Opitz, 2008). In the previous schedule design, we met with each guided-reading group twice in a six-day cycle. This new schedule design allows for three guided-reading group meetings in a six-day cycle, bringing us much closer to the national average. Four to six guided-reading

groups can meet on each literacy center day, depending on if our literacy specialist can also push in and lead two guided-reading groups during this hour.

### **Developing Literacy Centers for Our Classroom**

We want to ensure that all students are actively engaged in productive literacy work during this hour-long literacy block. The time away from the teacher must be equally as valuable to student learning as the time in guided reading with the teacher (Ford & Optiz, 2002). This research will help me and the team of kindergarten teachers at my school reflect on the implementation of literacy centers in our classroom with data and analysis. This study will assist us in determining the usefulness of literacy centers in our classrooms. My goal is to help us develop literacy centers for our classrooms that foster high student engagement and help students develop foundational literacy and learning skills.

The outcomes of this study will directly impact the practices of my kindergarten classroom and the other kindergarten classroom at my school. The results will also be communicated with other homeroom teachers at my school, who may find the use of literacy centers and data on student engagement to be meaningful and helpful in their own instructional practices. This study might also inspire other elementary teachers to examine their literacy instructional practices and student engagement at literacy centers to ensure students have access to highly engaging and meaningful literacy work both with the teacher and away from the teacher.

### **Summary**

In this chapter, I explored my journey to the topic of student engagement at literacy centers. My own early literacy experiences in and out of school provide a

meaningful personal connection to this research topic. The team of kindergarten teachers I work with began the process of examining our literacy instruction practices in my first year of teaching at my current school. As a result of that reflective process, we decided to implement literacy centers during guided reading for the 2019-2020 school year. This study will assist in that implementation process and help us determine the usefulness of literacy centers in ensuring that students have meaningful and highly engaging independent literacy work.

In Chapter Two, I will examine the current literature related to the topic of literacy centers. It provides the context and purpose of literacy centers in classrooms, describes the qualities of good, highly-engaging literacy centers and research-based implementation practices, and operationalizes the measure of student engagement at literacy centers. Chapter Three provides the methods for this study, including descriptions of the research paradigm, setting, participants and the literacy centers used in my classroom. It also details the methods of data collection and analysis. In Chapter Four, I will analyze the quantitative and qualitative data collected in my classroom to determine common characteristics of literacy centers that were highly engaging for my students. Finally in Chapter Five, I will discuss the findings of this study and the impact of those findings on my classroom practices related to literacy centers and instruction.

## CHAPTER 2

### LITERATURE REVIEW

#### Overview of the Chapter

The purpose of this study is to examine the use of literacy centers in my own kindergarten classroom. Literacy centers have become the most commonly practiced independent work and classroom management tools teachers use across the country to intentionally engage students away from the teacher during small group literacy instruction (Ford & Opitz, 2008; Worthy et. al. 2015; Fountas & Pinnell, 2017a). In this study I examine the following question:

What characteristics of literacy centers correlate with engaged, self-directed learning?

This chapter examines the current literature on the subject of literacy centers related to this research question. First, the historical context of literacy instruction and curricular decisions and approaches to literature instruction within recent decades is discussed. This path results in the practices around guided reading and a need for independent literacy work during guided-reading instruction. The next section examines the choice of literacy centers as the most common practice of independent literacy work and what qualities literacy centers offer to students including active learning, differentiation, social and cooperative learning, and perseverance and autonomy in

learning. Common pitfalls and limitations of independent work as well research-based practices of implementing quality literacy centers to avoid those pitfalls follow. The final section examines what engagement looks like in independent literacy work.

### **Early Literacy Instruction**

Literacy is the complex set of reading, writing, and word study skills. It is one of the most valuable sets of skills in the foundation of each student's educational career. Reading and writing gives us access to information to make sense of our world, provides us with a medium upon which to share our voices and ideas, and connects us to others across time and space. Literacy is also one of the most complex and cognitively challenging set of skills to acquire (Seidenberg, 2018; Lyon, 1997). According to the National Assessment of Educational Progress (NAEP), the average reading scores in the United States have not significantly changed since they were first administered in 1992. Over half the children tested continue to exhibit skills at basic or below basic reading levels (NAEP, 2017).

How does one best teach a child to read? The question has been persistent in educational, scientific and political arenas for many decades in the United States. Yet, those asking the question have not come together to solve the problem of so many of our students failing to read at grade level. The 2017 National Assessment of Educational Progress found that only one-third of students in the United States are proficient in reading at their grade level (McFarland, et. al. 2018).

Educators have a responsibility to provide the environment, experiences and support that will facilitate the acquisition of these complex skills. To do this teachers must bring together the science of how children learn to read, research-based curriculum

and classroom pedagogy, effective classroom management, and engaging tools and materials for their diverse learners.

**Approaches to Literacy Instruction in Recent Decades.** An examination of the teaching practices of the last several decades shows how vast and, at times, divergent approaches to teaching literacy have been. Every few decades, a “new” approach to reading instruction makes its way through classrooms in the United States (Morris, 2015). From the 1950s to 1980s reading instruction was heavily reliant on basal readers, phonics, and small group reading lessons. In the late 1980s through the 1990s, the “whole language” movement brought about an entirely different approach to teaching reading. The whole language movement was built around the idea that reading is a natural activity; a teacher’s main role in teaching literacy was to inspire a love of books and that as long as students had access to high-quality books, they would learn to read (Smith, 2006; Morris, 2015; Hanford, 2018). Phonics and small-group instruction was abandoned for single teacher-led literacy lessons to the entire class.

The No Child Left Behind Act of 2002 mandated phonics instruction in kindergarten and first grade, based on the scientific research that beginning readers must learn phonics and decoding skills in order to attain reading proficiency. A new movement, called balanced literacy, emerged. Balanced literacy asks teachers to use high-quality texts, teach phonemic awareness and phonics, and do both whole group and small group reading and writing instruction (Fountas & Pinnell, 2017b; Seidenberg, 2018; Morris, 2015; Hanford, 2018). The debate between the scientific world and the educational world about how students best learn to read is ongoing (Hanford, 2018). Researchers and cognitive neuroscientists say that balanced literacy does not go far

enough in systematic and explicit phonics instruction (Seidenberg, 2018). Children that do not learn to decode will not develop proficient reading skills unless they receive explicit phonics instruction. Children who develop decoding skills quickly demonstrate improved spelling abilities when they continue to receive phonics instruction (Hanford, 2018). Though the debate around how students learn best is ongoing, there are some currently agreed upon themes and approaches to quality literacy instruction described in the next section.

**Pedagogical and Philosophical Approach to Literacy Instruction.** Quality literacy instruction in the early grades is integral to long-term student success (Shanahan, 2008; Rog, 2001; Cunningham & Stanovich, 1997). Kindergarten is the time in a student's life where each child develops his or her foundational beliefs about themselves as learners and about the processes and dynamics within their school environment (Rog, 2001). Five- and six-year-olds enter their kindergarten year with a wide range of prior skills. The role of a kindergarten teacher is to meet each kindergartener at their existing skill set and provide them with the instruction and learning opportunities to reach their full potential (Rog, 2001).

After an analysis of the cyclical changes in literacy instruction in the last 30 years, Morris (2015) argues that three interrelated ideas hold true as successful approaches to literacy instruction in kindergarten and first grade: “interesting, carefully leveled book curriculum, leveled word study or phonics curriculum, and teacher training” (Morris, 2015 p.503). According to the International Reading Association (IRA) an effective teacher of early literacy:

- Believes all children can learn to read and write and understand the developmental nature of reading and writing,
- Knows a variety of approaches to literacy instruction and continuously seek professional development to improve their practice,
- Understands and uses flexible grouping strategies to differentiate instruction and offer a variety of methods, materials, and texts, and
- Provides strategic scaffolding for students to effectively develop the skills necessary to be strong independent readers and writers (IRA, 2000).

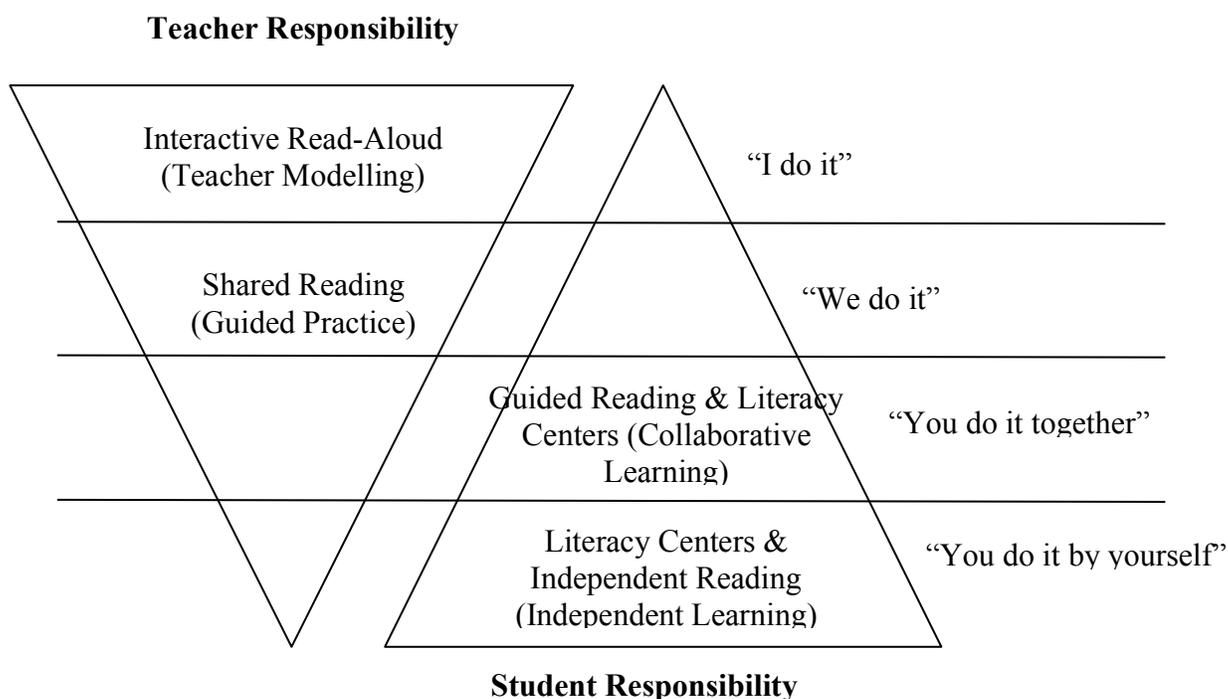
Fountas and Pinnell (2017b) organize literacy instruction into three interrelated areas: reading, writing, and phonics/word study. Instructional activities within these three main areas include interactive read-aloud and literature discussion, shared and performance reading, writing about reading, writing, oral and visual communication, technological communication, phonics/spelling/word study and guided reading .

The organization and pedagogical underpinnings of these instructional activities are grounded in the scaffolding theories of Russian psychologist Lev Vygotsky (1978) and the theory of Gradual Release of Responsibility (Pearson & Gallagher, 1983). As depicted in Figure 1, the teacher begins the learning journey as a model of a skill for the student (“I do it”), then the teacher and student jointly hold responsibility during guided practice (“we do it”), then students work together to accomplish the goal (“you do it together”), and finally a student is able to practice and apply the skill independently. For example, a skill may begin its development in an interactive read-aloud session where the teacher models a decoding or comprehension skill, then the teacher and students practice this skill during shared reading. Guided reading provides further guided practice as well

as opportunities for students to practice with their peers within the small group and during literacy centers. Finally, students utilize the practiced skill when independently reading.

### Figure 1

*Gradual Release of Responsibility. (Adapted from Fisher & Frey, 2008.)*



### Guided Reading and the Literacy Continuum

Despite its controversial resurgence in the early 2000s with the balanced literacy movement, guided reading has become widespread and there has been an increasing push toward the effectiveness of guided reading as a core component of literacy instruction (Ford & Opitz, 2008; Ford & Opitz, 2002). Guided reading aligns with the idea of strategic, scaffolded coaching for literacy, providing students with tailored instruction for their reading needs (Fountas & Pinnell, 2017a; Ford & Opitz, 2008). Research into

guided reading found that the practice is associated with high-achieving literacy classrooms (Taylor, Pearson, Clark & Walpole, 1999).

Guided reading is intended to be scaffolded instruction: students have teacher support while they experiment with and explore a new skill or strategy. Fountas & Pinnell (2017b), along with other literacy researchers (Boushey & Moser, 2012; Ford & Opitz, 2008), state that the ultimate goal of literacy instruction, especially guided reading, is the development of the set of skills required for students to engage with texts independently. The teacher provides the right coaching for each student based on the most appropriate skill. Student placement in a guided-reading group is constantly evaluated (Fountas & Pinnell, 2017a). The groupings must be “flexible and fluid” based on student need (Ford & Opitz, 2008, p. 316). Thus, guided reading must occur at times when all students are in the classroom, available for different group membership. Students not currently engaged in guided reading with the teacher need equally as valuable literacy activities to do away from the teacher as those they have with the teacher during guided reading.

The majority of the professional development and resources available to teachers revolve around what the teacher is doing with a small group of students. Even Fountas & Pinnell’s *Guided Reading* spends less than ten percent of the manual discussing management and independent literacy work (2017a). This gap of information and research inspired the purpose of this current study, examining the characteristics of independent literacy work associated with high student engagement.

## **Independent Literacy Work**

A guided-reading approach requires that the students not engaged with a teacher in guided reading are otherwise occupied in the classroom. A national survey of guided-reading practices revealed that of a two-hour block for language arts, students received 66-88 minutes a week of instruction with a teacher and up to 132 minutes a week away from the teacher (Ford & Opitz, 2008). Students spend a larger portion of their literacy time away from the teacher than directly with the teacher, and frequently have two days in a row of mostly independent work time in between guided reading sessions. How can teachers ensure that the instructional time away from the teacher is valuable literacy instruction?

Teachers have several choices and organizational structures to manage the “rest of the students”. During the small group instruction in traditional classrooms of the 1950s to 1980s, most students were tasked with workbooks or worksheets to fill the time away from the teacher. This approach requires minimal preparation on the part of the teacher, but the level of learning and engagement of the students is also minimal (Ford & Opitz, 2002). Another approach includes art projects or other cut and paste activities. While these activities can be engaging for the students, they are busy work that wastes valuable time for learning and practicing literacy skills (Ford & Opitz, 2002).

Mariott (1997) emphasises that the purpose of the activities students engage with away from the teacher are not merely to keep children busy or silent, rather teachers must see the time as an opportunity to apply their previously learned literacy skills in meaningful and instructionally appropriate ways. Teachers that have an established writers workshop program can combine the writers workshop with guided reading

instruction. Students can be working independently or in small groups on their writing, revising and editing (Ford & Opitz, 2002). Those are valuable literacy skills and practices for intermediate elementary grades, however they are beyond the reach of kindergarten students at the beginning of their reading and writing journey. Another commonly used independent work structure is a Daily Five workshop model. In the Daily Five, students can choose from five different independent activities during the literacy block: read to self, work on writing, partner reading, word work, or listen to reading (Boushey & Moser, 2012). Again, several of these independent activities are not instructionally appropriate for kindergarten students to accomplish independently.

Literacy centers are activities specifically designed and curated to provide practice of a previously learned skill independently or with a small group. Debbie Diller (2016) calls these curated activities literacy stations while Fountas & Pinnell (2017a) utilize the term literacy center. This paper will use the term literacy center to be in congruence with setting school's choice of Fountas & Pinnell as a foundation for the curriculum.

Whether they are called stations or centers, these independent tasks must be authentic, worthwhile and connected to learning outcomes. They must be simple enough that students can do them successfully without help from the teacher once the station directions and expectations have been taught. Students need to be able to access, use, and put away the materials independently. Ideally, they are relatively quiet, so as to not disrupt the guided reading and other working students, while also social in nature. Typically centers are more engaging to students when they are active and constructive (Fountas & Pinnell, 2017a). Examples of literacy centers are: Letter or Word Sorts,

Independent Reading, Writing Center, Listening Center, Poetry Center, Pocket Chart Poem Building, High-Frequency Word Hunt, and Read the Room. Teachers can choose specific literacy centers that connect with previously taught minilessons or guided-reading lesson skills.

**Why Literacy Centers.** Literacy centers have several advantages that make them the best choice for independent work in primary classrooms. They have the potential to provide high-quality, appropriate literacy work away from the teacher that effectively engages students independently. Morrow (1996) found that second-grade classrooms that utilized literacy centers and fostered collaborative work among students away from the teacher performed significantly better on several comprehension and reading measures as compared to second-grade classrooms that utilized a more traditional literacy instruction model. Other research also supports this finding (Maurer, 2010). The improved literacy performance can be linked to the many opportunities literacy centers can provide in the classroom.

**Active Learning.** When engaged in literacy centers, students participate actively in their own learning. Literacy centers align the constructivist and progressive (Dewey, 1916) philosophies of education. Students engage directly with materials and experiences to make sense of their world and develop skill sets. Literacy requires a set of skills learned through practice and perseverance as well as modelling and coaching (Morris, 2015). Centers provide a scaffolded means to support the important practice of modelled skills. Teachers can utilize a wide array of different centers for their students.

**Differentiation.** Literacy centers offer several opportunities for natural differentiation. Teachers can choose to have students cycle through literacy centers in

homogeneous ability groups (Fountas & Pinnell, 2017a; Falk-Ross, 2008). Each group is assigned to several centers with tasks curated to foster appropriate skill development. Another method is to provide several literacy center choices and have students self-select which centers they will do during their independent work time (Fountas & Pinnell, 2017a; Boushey & Moser, 2012). This practice allows students to differentiate for themselves and utilizes reflective practices to support students in finding those areas where independent practice will best support their literacy learning. Heterogeneous groups provide opportunities for students of different abilities and skill sets to engage in conversation and peer tutoring (Falk-Ross, 2008).

Fountas and Pinnell (2017a) offer a structure that provides a middle-of-the-road path between these two approaches. The teacher assigns two or three appropriate centers for each student to complete during his or her center time. Students may accomplish these centers in the order of their choosing. Therefore, students benefit from heterogeneous opportunities by interacting with peers in other guided-reading groups at the centers while also ensuring they prioritize appropriate centers. Once they complete the assigned centers, they can do an additional center of their choosing if time allows. As students become familiar with the process they can determine how much time they spend at each center as long as they get to all their assigned stations within the allotted time.

***Social Skills and Cooperative Learning.*** Literacy centers are social by design. Students engage with the literacy-center materials with small groups of their peers. While each activity has individual accountability, the process of each literacy center allows for and is enhanced by social and cooperative learning. While participating in literacy centers, students also develop skills of cooperative learning (Slavin, 1987). Students may

approach a center in a slightly different way than a peer and have to navigate working together. Centers provide many different opportunities for students to talk with peers, ask each other questions, and be respectful of others' ideas and opinions.

Further, the social nature of literacy centers enhances student literacy development. Vygotsky (1978) hypothesized that learning occurs within a social framework. Early literacy skills are especially linked to social learning. Research suggests that early literacy achievements are linked to two key learning processes: developing cognitive memory and motivation to become an independent reader and writer (Hay & Fielding-Barnsley, 2012). Opportunities for social interaction directly alongside literacy instruction assist in the development of both of these learning processes. The motivation to be an independent reader and writer is developed within an individual, but is impacted by the social interactions he or she has related to reading and writing. The social interactions with family or peers that provide positive affect related to reading and writing can improve this motivational process. The cognitive memory is assisted by many opportunities to link letters to sounds and words to meaning. Centers provide many natural opportunities, outside of the assigned center activity, to develop this cognitive memory through meaningful social interactions with peers, figuring out directions, and many different settings in which to talk to peers about an activity for short, frequent durations (Hay & Fielding-Barnsley, 2012). In a study on the standards and skills met by literacy centers, Mauerer (2010) found that the social interactions students had while engaged in literacy centers directly impacted decoding, vocabulary development and acquisition, and comprehension.

***Perseverance and Autonomy.*** The abilities to persevere through one's learning and have a sense of autonomy and empowerment within one's learning serve as valuable life-long skills for all students. Literacy centers are associated with growth of both individual perseverance and empowering students to lead their own learning (Bottini & Grossman, 2012; Falk-Ross, 2008; Diller, 2016). This facilitates greater engagement with their own learning as well as fewer power struggles with their teachers. Students begin to learn all of the things within their own locus of control, the activities and skills they *can* do, and understand the natural consequences of choices they make.

Centers hold the teacher accountable to serve the student as a guide on the student's learning journey rather than doing the learning for the student. Teachers must not do for students what they can do for themselves (Diller, 2016). This release of control can sometimes be difficult for teachers, especially in kindergarten. However, research has found that when students are given greater autonomy in their own learning through centers, students have increased self-confidence in their skills (O'Donnell & Hitpas, 2010). The individual accountability and choice opportunities provided by literacy centers allows teachers to foster a productive work environment where students can have more control in their learning and teachers can have greater opportunities to be responsive to students' needs.

**Literacy Center Limitations.** Though literacy centers are designed to provide students with worthwhile activities to do away from the teacher, sometimes the execution falls short of this goal. Teachers sometimes find themselves frequently interrupted with questions or behaviors from students assigned to literacy centers, so they are unable to effectively lead a guided-reading group.

Analysis of the common pitfalls that lead to these interruptions and ineffective literacy centers conclude that misinterpreted directions, inappropriate scheduling, students not understanding the purpose of the activity or how it relates to their learning, and too challenging of a task or not challenging enough of a task are the most common factors that lead to student disengagement and limited productivity (Kracl, 2012; Worthy et. al, 2015; Smith & Simmons, 1978). Off-task behaviors can generally be attributed to misinterpreted directions or an unclear set up, too complex of directions that require students to read or remember multiple steps, incorrect level of challenge or not connecting the center activities to what the students are doing with the teacher in minilessons or guided-reading lessons (Worthy et. al., 2015; Smith & Simmons, 1978). The lowest-level readers tend to be the most off-task or confused during centers (Worthy et. al., 2015; Connor, Morrison, & Petrella, 2004). Kindergartners are usually brand new readers that are likely to fall into this category.

There are several scheduling suggestions for literacy centers. Depending on the length of time for centers, teachers can design appropriate schedules. Too much time for one activity can lead to boredom and off-task behavior if the student completes the activity before the time is through (Kracl, 2012). Transitions between centers can also be challenging. Fountas & Pinnell (2017a) suggest two approaches for managing multiple-center transitions. First, teachers can signal the time for a switch so all students switch to a new center at the same time. This can serve as an accountability check-in for students as well and is usually timed with the switch of guided-reading group with the teacher. However, students that take a little longer at a center may be frustrated and students that finished a center before a transition may begin off-task behaviors. Another option is to

assign each student two to three literacy centers to complete in the literacy center block. When they complete the task, they clean up, turn in any associated work to their file and move on to the next center. This provides students with additional autonomy, but can have complications if too many students end up at a center at one time or students begin to wander in the classroom with less transition structure. Ultimately the choice in scheduling and organizing centers must work for the teacher, classroom environment and most of all the students.

Teachers must also be mindful of what they train students to do when they have questions or become stuck at a literacy center. Many teachers tell students that they should only interrupt the guided-reading lesson for teacher help if there is an emergency. However, studies observing teachers found that even those teachers that explicitly teach to minimize interruptions are interrupted five to eight times in a one-hour period (Worthy et. al., 2015). Some of these interruptions were redirections of off-task behavior, but the majority were student questions. The observed teachers responded to the behaviors and the questions in a variety of ways from waving the student away, to answering the question or stopping guided reading to remind the student of the directions. Teachers must be consistent with how they respond to student questions, so that the response students receive from the teacher is consistent with the previously explained teacher expectations during literacy centers. Otherwise, students will be confused about the expectations and their enforcement. This is where the first six weeks establishing center routines and teaching each center explicitly is so valuable. The next section describes effective implementation strategies for literacy centers in kindergarten classrooms.

**Implementing Literacy Centers.** Though students engage with literacy centers away from the teacher, the implementation of literacy centers requires significant investments of time, planning and preparation to ensure the centers achieve their potential in the classroom. Ford and Opitz (2002) stress the importance that the activities away from the teacher must match the power of instruction that occurs with the teacher. Teachers must also consider how they will address the common pitfalls of literacy centers. This means that literacy centers must be implemented with a number of factors in mind.

First, each literacy center must be created with specific learning outcomes in mind and there must be a method of assessing those outcomes and the activities need to be designed in such a way that they all require students to interact with print whether they are reading, writing or both (Ford & Opitz, 2002; O'Donnell & Hitpas, 2010). Some of the literacy center activities offered as suggestions by Fountas & Pinnell (2017a) are activities related to art, math or science or are play centers. These suggestions are not connected to the literacy curriculum and may not be appropriate in all classrooms depending on their set-up and scheduled time for literacy within their school day. Fountas & Pinnell provide resources and suggestions that can be tailored to fit many different kinds of classrooms. Teachers that select these options as centers must be aware that the time students spend doing art, math, science or play centers is not focused literacy time with literacy learning outcomes in mind.

Second, the centers and tasks must be structured in such a way that the students can be successful when working independently. The tasks at literacy centers need to be clear to students without needing written directions. Teachers can achieve this in two

ways. First, the design of the task should be simple and easily inferred or remembered. Second, when introducing each center teachers must explicitly teach and practice the center with the students until the students show that they are able to be independent (Diller, 2015; Fountas & Pinnell, 2017a). At the beginning of the year, teachers introduce one center at a time as literacy lessons with the teacher and help students practice and troubleshoot the centers until little to no guidance or answers to questions are needed for the students to engage in the center. Fountas & Pinnell (2019) wrote their reading minilessons guide with this exact structure in mind.

Finally, teachers must support students in their independence through the systematic development of the routine and classroom environment around literacy centers (Diller, 2016; Fountas & Pinnell, 2017a; Fountas & Pinnell, 2019; Ford & Opitz, 2002). The management of centers is one of the biggest limitations to teachers implementing literacy centers (Kracl, 2012). The development of routines around centers and a classroom environment conducive to independent, student-driven learning takes time and a significant amount of setup at the beginning of the year. Only when students have had enough practice with the routines and procedures at the centers should teachers begin to use them as fully independent activities (Diller, 2016). This process will take several weeks at the beginning of the school year.

### **Student Engagement in Literacy Work**

Despite literacy centers becoming an increasingly common practice across elementary classrooms in the United States and the publication of many different guides to implementing literacy centers, there remain relatively few studies on student engagement while interacting with literacy center activities. Brophy (1987) states that the

two keys that motivate engagement in learning are the perception of the possibility of success at an activity and the perception that the outcome will be valued. Concept Oriented Reading Instruction (CORI) defines engagement by four attributes. According to CORI, engaged readers use cognitive strategies, have motivation to learn, are knowledge driven, and are socially interactive in learning (CORI: Reading Engagement Project Overview, 2019).

Several studies point to common factors of literacy centers where students seem to be engaged or where teachers reported improved student engagement. Kracl (2012) found that teachers most appreciated the structure of using “I Can...” lists to introduce centers to students. These lists provided clear instructions and visuals for what students can do at each center. This factor relates to Brophy’s (1987) concept of the perception of the possibility of success. Smith and Simmons (1978) take it a step further and list questions students might ask if evaluating a center. Teachers can use these questions when developing a center for their classroom. These questions from Smith and Simmons (1978) include:

1. Do I know *why* I am doing this activity? Does this activity matter for my learning?
2. Do I have the prerequisite skills so I can do this task successfully?
3. Will I be encouraged to evaluate my own progress?
4. Will you (teacher) evaluate my progress? (p. 404)

These questions support the idea that students are more engaged when they perceive the activity is valuable and know how the activity fits together with other things they are learning. Peterson & Davis (2007) implemented a goal-setting practice in conjunction

with their fourth-grade-literacy centers and asked students to do a quick reflection at the end of their center time on what they learned and what activities were fun. They found that students self-regulation and overall engagement improved when they set their own goals to meet. These studies, however, did not operationalize what engagement looks like at individual centers and used anecdotal evidence to support their findings.

Ponitz & Rimm-Kaufman (2011) studied behavioral engagement of kindergarteners in four instructional contexts, including child-managed activities related to basic skills and meaning, which are similar to the literacy centers examined in this study. They coded behaviors, using a coding manual designed specifically for the study, in those contexts and calculated engaged minutes and off-task minutes in each instructional context. Their study found students to be on task for a greater percentage of the time in teacher-managed contexts over child-managed ones, but overall students spent more time engaged and on task than off task in all contexts in the classrooms studied.

Each literacy center has its own set of behaviors that demonstrate student engagement. The behaviors are directly linked to the desired learning outcomes of each center and are mindful of what students can do independently. Table 1 in the methods section of this paper details the specific engaged behaviors for the literacy centers used in this study. Very little literature currently exists that compares student engagement at different independent literacy work centers. The majority of the current research points to why independent literacy work is necessary, yet potentially problematic as students tend to be less engaged when working independently versus when under direct instruction with the teacher. This gap in the literature is precisely the focus of this current study, to

examine the characteristics of centers that are associated with more engaging independent literacy work for kindergarteners.

### **Conclusion**

This chapter reviewed the current literature examining the use of literacy centers in elementary classrooms and placed this study within the context of previous research. The historical context of literacy instruction proceeded in chronological order to better understand the practices of guided reading and the need for independent literacy work. Then the choice of literacy centers as the best candidate for the design of independent literacy work was examined. Literacy centers provide opportunities for active learning, differentiation, social and cooperative learning, and development of perseverance and autonomy for the kindergarten learners. Common pitfalls and methods of implementation to avoid those pitfalls followed. Finally, the limited literature around the study of student engagement during literacy centers and literature supporting the design of methodology of this study were explained. In Chapter Three, the context of this study, the specific methods of implementation of literacy centers in my classroom, data collection with observations and student interviews, and data analysis will all be outlined in detail.

## **CHAPTER 3**

### **METHODS**

#### **Introduction**

This study was designed to gather information about the characteristics of literacy centers that are associated with high student engagement in my kindergarten classroom. As a result of this study, my co-teacher and I were able to keep the literacy centers, or parts of literacy centers, that are high engagement and provide practice and application for valuable literacy skills and modify or replace literacy centers that are not engaging to kindergarten students in our classroom. The study explored the following research question:

What characteristics of literacy centers correlate with engaged, self-directed learning?

#### **Research Paradigm**

This study was designed as action research within my own classroom (Mills, 2014). The data and analysis were used to inform and improve my own classroom practices. The study used a convergent parallel mixed methods research paradigm (Creswell, 2014). Both qualitative and quantitative methods of data collection were used concurrently. The quantitative data, in the form of percent of student time actively engaged at each center, numerically coded student-self-reported engagement questionnaires, and numerically coded rubrics of student work samples, showed which

literacy centers were associated with the highest student engagement. The qualitative data, in the form of student group discussion and observations along with analysis of common characteristics among the high engagement centers provided insight into the specific characteristics of centers correlated with higher student engagement. All five sources of data work together to inform the findings of this study.

### **Participants**

The participants of this study were selected with a convenience sampling. The participants were students within my own kindergarten classroom in the 2019-2020 school year. Fifteen students participated in the study. Eight students were girls; seven students were boys. At the time of data collection, four students were six years old and eleven were five years old. Almost all students turned six over the course of the year, with the exception of one student who turned six mid-June. Fifty-three percent of the students self-identified as white and forty-seven percent of the students self-identified as students of color.

Fourteen students had English as their dominant first language. One student spoke Hindi as the primary home language. One student was also learning Greek at home. One student was being raised trilingual with English, French and Swedish. One student attended a Spanish immersion school for preschool and comfortably spoke basic conversational Spanish. Four students entered the year with some reading ability, assessed on the Fountas & Pinnell Baseline Assessment System (BAS) between instructional level B-D. One student assessed at instructional level I with exemplary word solving skills but needed support in comprehension and fluency. The rest of the students were pre-readers when entering kindergarten.

## Setting

This study took place at an urban, K-12, tuition-based, independent school in the upper midwest. For the 2019-2020 school year, there were about 1000 enrolled students across the three divisions of the school: lower (K-5), middle (6-8), and upper (9-12). The school had one of the lowest class-size averages compared to other independent schools in the state. The overall student to teacher ratio is 8:1. There were 128 full time faculty members, 80% of which hold an advanced degree beyond the baccalaureate.

The lower school exists at a separate campus and the middle and upper school share a campus. For the 2019-2020 school year, the lower school had about 300 enrolled students in Kindergarten through fifth grade. Each lower school homeroom follows a co-teaching model, with two full-time teachers in each classroom. There are two full-day kindergarten classrooms, three combined first and second-grade classrooms, four combined third- and fourth-grade classrooms, and two fifth-grade classrooms. For the year of this study, thirty-eight percent of the students enrolled in the lower school were students of color. The school awards over \$3 million in financial aid to enrolled families each year. About one quarter of enrolled students receive a financial award that covers on average 55% of the tuition cost.

The student participants engaged in literacy centers during a one-hour literacy block that occurs on days two, four and six of our six-day calendar cycle. The literacy centers were designed to be independent activities for students to develop and practice previously taught literacy skills while the teachers meet with guided-reading groups. The year of this study was the first year in this classroom in which these literacy centers have been implemented.

## **Implementation of Literacy Centers**

Implementation of the literacy centers was modelled after the Fountas & Pinnell's (2019) kindergarten literacy minilessons. The lessons built upon each other starting on the first week of school to develop the habits and skills students need to be successful in their independent literacy skills. Students were taught one center at a time starting the first month of school. As discussed in Chapter One, literacy centers took place every other day in the school's six-day schedule cycle. This was a one-hour block of time designated for independent literacy work and small-group, guided-reading instruction. Guided-reading instruction did not begin immediately at the start of the school year. Literacy center time for the first eight weeks of school focused on teaching each center, practicing the centers, and helping students troubleshoot within each center. Students worked toward being able to work independently and successfully at each center without needing teacher support.

Table 1 lists each center in order of implementation, a description of learning outcomes and engaged behaviors, and characteristics of each center. Each center was designed by myself and my kindergarten colleagues. We designed each center using resources from Fountas & Pinnell (2017a, 2019) and Diller (2016) to fit the needs of our classrooms. The specific behaviors that mark student engagement were written by me as I reflected on the activities, what students are doing at those activities, how the activities will be taught and what expectations we have of students at those activities. Some of the characteristics were rooted in prior research for aspects of literacy centers that tend to make them more successful, such as social interaction (Mauerer, 2010; Falk-Ross, 2008; Vygotsky, 1978), active student production (Dewey, 1916; Morris, 2015), and level of

complexity or creativity (Bottini & Grossman, 2012; Falk-Ross, 2008; Diller, 2016).

Others were derived mostly from my classroom experience witnessing that students tended to be more engaged with an activity when some kind of movement was involved, and that technology could both positively or negatively affect student engagement depending on the situation. I also defined the characteristics listed for each center.

- **Social vs Independent:** Are students more engaged when they are able to be social at literacy centers? Some of the centers were designed to be social for students (Read the Room, Pocket Charts, Writing Center, Word Sorts). While completing the assignment students may work with their peers to accomplish the task together. Other centers were designed to be more independent (Listen to a Story, Independent Reading). Though I have listed this characteristic for each center, I will also take note in my student observations when students choose to work independently at a center that could be social or work more socially at a center designed to be independent. In that instance, it is how the student approaches the center that enhances engagement with or without social connections.
- **Movement vs Sedentary:** Are students more engaged when there is physical movement involved in the centers? Some of the centers (Read the Room, Pocket Charts) were conducive to lots of physical movement while the students are doing them and others are more sedentary activities (Independent Reading, Writing Center, High-Frequency Word Hunt). In previous experience in kindergarten classrooms, sometimes elements of movement can greatly increase a child's ability to stay engaged with an

activity. It does, however, open a student up to more distractions when walking by other activities going on in the room.

- **Production vs Consumption:** Are students more engaged when they are producing something as a part of the center? At some of the centers (Read the Room, Writing Center, Pocket Chart) students are actively producing a product while engaged at the literacy center, while others they are primarily consuming literacy (High-Frequency Word Hunt, Independent Reading, Listen to a Story). I did note that some centers have both production and consumption at different times at the center: for example Independent Reading and Listen to a Story centers have students primarily consuming literacy, but students also produce a reading response.
- **Skill Practice vs Creative:** Are students more engaged when they can be creative at the literacy center? Some of the centers are designed with more creativity, where students have more choice in what they do and how they do the center (Writing Center, Independent Reading Response, Listen to a Story Response) where others are designed as a more focused skill practice (Read the Room, Word Sorts, High-Frequency Word Hunt, Pocket Chart). More creativity can also mean more complexity to the activity, which can promote higher order thinking and engagement if the student is ready with their foundational skills. Too complex activities without enough structure could feel overwhelming to students that aren't yet as confident in foundational skills.

- **Technology vs No Technology:** Are students more engaged when there is some involvement of technology in the center? We are very mindful in how we utilize technology in our classrooms. Listen to a Story is the center that involves the most use of technology for the ease of using apps and listening websites that help students match and track the words on the screen in the story they are listening to. Other centers (Pocket Chart and Word Sort) utilize the iPads to take pictures of their work to upload on our classroom sharing site, SeeSaw, as a work sample.

**Table 1***Literacy Center Descriptions, Engaged Behaviors and Center Characteristics*

Center	Description and Materials	Engaged Behaviors	Characteristics
Word Sorts	Students will be given a set of words to sort based on pretaught criteria (taught in a prior minilesson or guided-reading group). In the beginning of the year, we will start with letter sorts. This will include letters in my name/letters not in my name, sorting by shape/size, sorting lower/upper case letters. Later, the majority of these sorts will come from the <i>Words Their Way</i> program, designed to target specific phonics skills in a systematic way. Students get out their Words Their Way notebook and bring it to the classroom rug, retrieve their current sort from the envelope and sort the words/letters into the correct columns. After they sort, they ask a classmate to listen to them read it aloud to check their work and hear the sound relationship. Their peer marks a star on their notebook page after listening. Then the student takes a picture and records his or	Student sorts words/letters into columns  Student reads the words aloud, listening for sound relationships  Student does three sorts and glues down words	Social Sedentary Production Skill Practice Technology (SeeSaw)

Center	Description and Materials	Engaged Behaviors	Characteristics
	<p>her voice on a SeeSaw post with an iPad.</p> <p>Materials: Notebooks, letter/word sorts, glue sticks</p>		
<p>High-Frequency Word Hunt</p>	<p>After a shared reading, students get their own copy of the text. Students read the text and use highlighters to mark high-frequency words (HFW) they find. Students may reference our classroom word wall or their own word chart to support identification. Teachers set an amount of HFWs students must find to accomplish the task and leave the challenge open to find more than the assigned amount. Students turn their copy into their file to be checked by a teacher and returned. Later students may go on a HFW find in a book of their choosing and write a list of the words they find.</p> <p>Materials: Consumable books (Reading A-Z printouts), crayons, HFW charts</p>	<p>Student reads the text</p> <p>Student identifies high-frequency words and highlights them appropriately</p> <p>Student turns in work when completed</p>	<p>Independent Sedentary Consumption Skill Practice No Technology</p>
<p>Independent Reading</p>	<p>Students each have their own book bin to store up to five self-selected books from our classroom library. Students bring their book bin to a comfortable reading area and read their books quietly out loud. Students choose one book to write the title and draw a picture or write a sentence response in their reading response journal.</p> <p>As the year progresses, students will discover how to find “just right” books for their independent-reading level. Their most recent guided reading book will also live in their book bin.</p> <p>Materials: Book bins, classroom library, comfortable reading area, reading response journal</p>	<p>Student demonstrates concepts of print in how s/he interacts with the books</p> <p>Student reads the story aloud, points at text (continuously levels A-C, at difficulty levels D+)</p> <p>Student writes or draws one response</p>	<p>Independent Sedentary No Technology Creative Consumption (reading) Production (response)</p>

Center	Description and Materials	Engaged Behaviors	Characteristics
Listen to a Story	<p>Using an iPad and headphones, students use the QR codes to access curated videos of read-aloud books to listen and read along with stories of their choosing. Students draw a picture or write a sentence about the story in their reading journals after they listen and read.</p> <p>Materials: iPads, headphones, reading journals, clipboards, pencils, QR code book (curated books from <a href="http://storylineonline.com">storylineonline.com</a> and <a href="http://readbrightly.com">readbrightly.com</a>)</p>	<p>Student listening to the story, looking at the words and pictures</p> <p>Student draws or writes a response in reading journal</p>	<p>Independent Sedentary Technology Creative Consumption (reading) Production (response)</p>
Writing Center	<p>Students are provided with materials to write and draw their own stories. In the beginning of the year, there will be blank books for students to create their own stories as well as books to support their phonemic awareness (alphabet books) and concepts of print. Later students will have access to books with lines as well as places for a picture to support their printing and story structure.</p> <p>Materials: Blank writing options, word cards, picture prompts, pencils</p>	<p>Student talks with peers about the story s/he is creating.</p> <p>Student draws pictures that match the story.</p> <p>Student writes letters, words, or sentences to help tell the story (increase expectation with skill level)</p>	<p>Social Sedentary Production Creative No Technology</p>
Read the Room	<p>Students go on a word hunt throughout the room. They each get a paper with two letters. Students find words that start with those letters, sound the word out with a partner, and copy them down on the paper.</p> <p>In the beginning of the year, the words will mostly be labels on objects or with pictures so students can have support to know what the words are. Later in the year the word hunt can function as a scavenger hunt. Students work in partners to find words in our print-rich room. We can vary thematically with our units.</p> <p>Examples: Words with ___ letters,</p>	<p>Student locates words that match assignment/task</p> <p>Student sounds words out and reads words aloud</p> <p>Student writes word down</p>	<p>Social Movement Production Skill Practice No Technology</p>

Center	Description and Materials	Engaged Behaviors	Characteristics
	Words in the ___ word family, Words that rhyme with ____ Materials: Clearly printed words in our classroom, clipboards, RTR paper and pencils		
Pocket Chart	Using a familiar class song or shared reading as a model, students build the sentences in a Pocket Chart from prewritten sentence strips. Then students read/sing their work. In the beginning of the year whole phrases will be on one sentence strip so it is easier for students to identify. Later students can use smaller phrases or single words, fill- in-the-blanks or write down their own version of it after working together on the Pocket Chart. Materials: Pocket Chart, Sentence Strips	Student sings/says a known shared song/reading  Student finds matching sentence strips using word solving skills  Student rereads whole Pocket Chart once complete	Social Movement Production Skill Practice Technology (SeeSaw)

(Diller, 2016; Fountas & Pinnell, 2017a; Fountas & Pinnell, 2019; Bear, Invernizzi et. al, 2015)

When fully implemented, the structure of the literacy-center time followed the recommendations of Fountas & Pinnell (2017a). Students were assigned two or three centers to accomplish during their center time. The assigned centers were on display in the classroom on a task board that listed the names of students and symbols for the assigned centers for those groups of students. At the beginning of the one hour block, half of the students went to their guided reading groups with myself, my co-teacher or, our push-in literacy specialist, the other half of the students went to their assigned literacy centers. They could independently change to the next center once they have finished at the first without a signal from the teacher. If they accomplished all of their assigned centers, students could choose to do an additional center from an approved list on the

taskboard. Because of space and iPad limitations in our classroom, some centers could not be utilized concurrently to others, for example Word Sort and Listen to a Story both needed several iPads and space on the rug so they had to run on opposing days.

Whether a student is doing an assigned center or a center he chooses to do may also impact the student's engagement at the center, this factor was intended to be included in my observation data. However, sometimes none or only one or two students (and usually the same students) each day had the opportunity to choose an additional center, so this data was not utilized in the analysis.

As students finished in their guided reading groups, they began their center work and teachers tapped the shoulders of their second group of guided reading students to call them over. Those students cleaned up their literacy centers, turned in their work to their file and went to their guided-reading group. Cleaning up and transitioning between literacy centers was well practiced in the first eight weeks of school. The second half of the literacy block ran the same as the first.

### **Data Collection and Analysis**

Data was collected through five different modalities. First, video recordings of the students at the literacy centers were used to calculate the average percent of time students exhibited on-task, engaged behaviors (listed in Table 1) at each center. Second, students self-reported their feelings of engagement after participating at each center through a simple, two-question questionnaire (Appendix C) . Third, student work samples from each center were analyzed on a common rubric (Appendix D). Fourth, students were interviewed in a video-recorded, whole-class interview and discussion. Fifth, the videos were also used for quantitative observational data of student behaviors at each center.

This discussion along with observations from the recorded video of student activities at the centers provided greater context and understanding of what characteristics of the centers tended to attract greater student engagement. Some of the behavior observations from the qualitative data were tallied for the amount of instances of teacher redirection or interruption and technology interruption or distraction and included in the quantitative data reporting. Together these sources of data helped to answer this study's research question: What characteristics of literacy centers correlate with engaged, self-directed learning?

The quantitative and qualitative data from the five sources of information described above was analyzed to determine which centers were correlated with higher student engagement. As I compared the centers by the quantitative data collected, I separated the centers with higher engagement as shown by the following data criteria:

- 1) Students spent a high percentage of time actively engaged in the center while at the center.
- 2) Students self-reported liking the activity and/or felt like the center was helpful for their skills as a reader and/or writer. The average score of question one related to enjoyment was closer to a three and/or the average score of question two related to growth was closer to a three.
- 3) Students accomplished the center task and were able to do the task accurately for their known skills. The average work sample score was closer to two.

The centers were also compared using the qualitative data from video observations and student discussions. The qualitative data was used to enhance the

findings of the quantitative analysis and helped me understand which characteristics of those centers might be reasons why those centers were associated with higher engagement. The behavior observations and student discussion may point to certain characteristics of centers that students find more engaging than others.

I then looked at the centers with data that show high engagement scores and analyzed them for common characteristics. The characteristics for each center are described in Table 1 from earlier in this chapter. This analysis along with the quantitative data allowed me to answer which characteristics of literacy centers are correlated with student engagement. (Pointz & Rimm-Kaufman, 2012; Peterson & Davis, 2007).

Two pilot data collection tests were conducted prior to executing on this study. The first pilot tested interview questions with students in the 2018-2019 school year after they were introduced to some of the literacy centers we were trying out in our classroom. Findings from that pilot helped me to narrow down what interview questions helped to answer this study's research question and led me to decide to do the interview questions in a group discussion setting instead of individual interviews to get more authentic and thoughtful student responses. The second pilot tested the video recording process used in this study. This pilot was conducted in late September of the 2019-2020 school year. This helped me to determine proper placement of each of the cameras and that two cameras at a time in the classroom was the maximum feasible amount for management and the placement of those video cameras to get visual and audio data. For this pilot, I also practiced the coding procedure and calculations for determining percent of time on task, using time stamp information from the videos for each student.

The data was collected across a three-week time frame in November. This allowed the kindergarten students to become comfortable at school, in our classroom and with the centers during the first eight weeks of school prior to being observed. The following subsections describe in detail each of the five modalities of data collection.

**Percent of Time Actively Engaged with the Center.** A video camera was focused on two of the seven literacy centers on each observation day. Students were accustomed to the video cameras in the classroom as the cameras were left in the room after the pilot testing so the cameras just became a part of the classroom for the students. This helped ensure that the cameras were not a distraction for the students while doing the literacy center activities. Two center observations per day was decided upon due to availability of cameras and practical management of observations. Literacy center activities occur on days two, four, and six of our six-day cycle. Each literacy center was video recorded twice during the period of data recording, with an extra day built in for any unforeseen circumstances, as shown in Table 2. Listen to a Story observations on Day 4 were not included because the video camera erroneously only captured half of the center time. The schedule of observations was then altered so that the first Listen to a Story could be recorded on Observation Day 5 and the second on Observation Day 8.

The video recordings were analyzed for the amount of engaged time students spent at each literacy center. The design of this quantitative analysis was based upon the research model used by Ponitz & Rimm-Kaufman (2011) who observed kindergartener behaviors in different instructional contexts, coded the behaviors and calculated engaged minutes and off-task minutes in each instructional context.

**Table 2***Observation Schedule for Percent of Time Actively Engaged with the Center*

Observation Day 1	Observation Day 5
Pocket Chart Independent Reading	Read the Room (Live) Listen to a Story
Observation Day 2	Observation Day 6
Writing Center High-Frequency Word Hunt	Writing Center Word Sorts
Observation Day 3	Observation Day 7
Read the Room (Live) Word Sorts	Independent Reading High-Frequency Word Hunt
Observation Day 4	Observation Day 8
Pocket Chart ( <i>Listen to a Story</i> )	Any observations that needed to be redone: Listen to a Story

During the first viewing I confirmed the engaged or not engaged behaviors listed in Table 1. Then, using the Observation form (Appendix F), I recorded each student's start time at the center, start and stop time of any off-task behaviors and the time the student finished at the center. I was able to record information for two to four students at the same time, using the ability to pause and rewind as necessary to ensure I had caught all notable behaviors and accurate time stamp information. Total time at the center was calculated by subtracting the end time from the start time and then converted into seconds. All off-task or disengaged behavior time was added up in seconds. Engaged time was calculated by subtracting the disengaged time from the total time, using an Excel spreadsheet. The percent of time actively engaged with the center was calculated by dividing the engaged time by the total time each student spends at the center in the

same Excel spreadsheet. An average percent of time actively engaged was calculated for each center across the observations.

The averages were compared within the Excel spreadsheet to order the centers based on average percentage of actively engaged time. Students should be spending the majority of their time away from teacher instruction actively engaged in their literacy activities (Ford & Opitz, 2002). Average percent time of actively engaged behaviors helps demonstrate which literacy centers are correlated with more student engagement.

**Student Self-Reported Engagement.** After completing each of the literacy centers, students filled out a brief, two-question questionnaire (Appendix C). The first question asked the students: how much did you enjoy doing this center? The students then selected a smiley face, a flat line face or a frowny face symbol. The smiley face meant “I enjoyed it a lot”, the flat line face meant “it was okay” and the frown face meant “I didn’t like it. The second question asked students: How much did this center help you become a better reader or writer? Students selected a smiley face, a flat line face or a frowny face symbol. The smiley face meant “it helped me a lot”, the flat line face meant “it helped me a little bit”, the frowny face meant “it didn’t really help me”.

Students were pre-taught what each of the questions were and what the corresponding symbols meant. These questions helped me know how engaged each student felt at the center, through enjoyment and/or due to confidence growth. Filling this questionnaire out independently at the centers was difficult for the students to remember and manage. For this study, I called students over one at a time during the Free Choice time later in the same day they were at the centers to have them fill out the questionnaires. Though there is potential that students slightly altered their responses due

to the teacher presence, this procedure ensured every student had the same opportunity to provide feedback. It also allowed me to capture some verbal feedback about the centers from students as they filled out the form, which enhanced my qualitative analysis.

The results from this questionnaire were coded to perform quantitative analysis on the data. For the first question the smiley face was coded as a three, the flat line face as a two and the frowny face as a one. The enjoyment responses for each center were averaged. Likewise, for the second question. A center where students self-report liking the activity and feel like they grew their confidence in their skills is an engaging center. Students self-reporting liking the activity but not growing confidence may also indicate an engaging center. The student may not be aware of the growth of skills, may be confident in skills but likes the activity anyway for another reason (interaction with technology, for example), or may have been off task but enjoyed doing the center because she could do something with her friends. Thus, the analysis of this data must work in concert with the other data and observations to determine correlation with engagement.

**Work Sample.** Students produced a work sample at each literacy center. In the case of the Read the Room, High-Frequency Word Hunt, and the Writing Centers the work sample was the entire activity the student was working on at the center. For the Pocket Chart and Word Sort centers students used iPads to take an image of their work and upload the image onto their SeeSaw account where I was able to examine it. At the Independent Reading and Listen to a Story centers, students produced a reader's response drawing or writing after they had read or listened to a story in their reading response journal.

If a student did not have time to finish the work at their last center, they put their work in a bin above their turn in slots called the “Not Quite Done Yet” bin. They were assigned to that center in the next rotation so they could finish the work. Some students chose to go back and finish their work later that afternoon during Free Choice. This process separated the work samples that were incomplete due to time constraint from those incomplete due to lack of engagement.

The work samples were examined using a rubric (Appendix D). The first area of the rubric assessed if the student accomplished the assignment. Student work was coded with a two if they did the work completely, a one if they partially did the work and a zero if they did not do the work. The second area of the rubric assesses the accuracy of the work relative to the student’s reading level. Student work was coded with a two if there were few to no errors for student’s reading level and the student clearly used known skills to complete the assignment, a one if there were some errors for student’s reading level and the student mostly used known skills to complete the assignment, or a zero if there were many errors for student reading level and the student was clearly rushing or disengaged, not using known skills to complete the assignment. The data from these work samples were averaged for each center.

Students that fully completed the work at the centers were more likely to be engaged at the centers than students that struggled to complete the assignments at the centers. Therefore, centers whose work samples had higher averages (closer to two) suggested greater student engagement, where centers with lower averages (closer to zero) suggested lower student engagement.

**Student Discussion Interview.** Students participated in a group discussion about the literacy centers. The discussion was video recorded for analysis and lasted about twenty-five minutes. Students were asked to describe their experiences and feelings about the literacy centers. Students were informed that the purpose of these discussions was to study how students engaged with the literacy centers and for their teachers to improve the literacy centers.

I asked the students a few prepared discussion questions and asked students to expand on their thoughts about the literacy centers (Appendix E). For example, “What literacy center activity do you enjoy doing the most? Tell me what you like about that center.” The questions used in this study were written after examining the interview questions used in other similar studies (Vaughn, 2012; Peterson & Davis, 2007; Smith & Simmons, 1978). They were designed to gain insight into which literacy centers kindergarten students found most engaging themselves, why they found it engaging and what they felt they were learning. This information provided greater context for the observational data and assisted in answering this study’s research question. Student feedback allowed me to dig into students’ reflections on why certain centers were more enjoyable or engaging.

**Observations.** While watching the videos for engaged time and during additional viewings, I looked for other patterns of behavior related to engagement or disengagement at the literacy centers. I also noted surprises or unexpected behaviors at the centers. It was here that I was able to note if a student chose to do a social center independently or an independent center more socially. I was also able to see students that maybe took longer at a center than I would have expected but were really engaged and deeply connected to

the center tasks, or conversely became distracted for a reason such as the availability of an iPad. Further, I noted any additional factors that could have influenced student engagement, such as proximity to other centers, proximity to a teacher, or the number of students at the center at the same time.

These observations and quantitative data were used in conjunction with student interviews to answer this study's research question. The qualitative analysis helped me pull out specific characteristics or factors of the centers that provided greater context and reasoning about why certain centers were more strongly associated with higher student engagement.

### **Human Subject Research**

Parents or guardians of the students in my classroom heard about the research at our back-to-school night in early September and a follow up via email in October with the informed consent form (Appendix H). They were informed of the purpose of this study as well as the procedures of observation and interviews for the study. All students' identities were protected and kept anonymous. Names were removed and random letters were given for any labelling of data. The videos captured were used only for observational purposes and all copies were destroyed once observations were made. If a student or student's parent/guardian decided they did not wish to be a participant in this study, no data was collected on that student. Any nonparticipant student still partook in the literacy centers as a part of our regular kindergarten curriculum, but no data was collected on those students. Those students were not excluded from the group conversations, but no quotes or other data/observations were used from those students as a part of this study.

## Summary

The methods of both the implementation of the literacy centers and analysis of student engagement at each literacy center were described in this chapter. The literacy centers were implemented one at a time over the course of the first eight weeks of school in the following order: Word Sorts, High-Frequency Word Hunt, Listen to a Story, Writing Center, Read the Room, and Pocket Chart. Quantitative and qualitative data were collected over a four-week time period. Quantitative data was collected in the form of percent of time students were actively engaged at the center, student self-reported engagement, and student work samples. Observations of students at the centers as well as student discussions provided qualitative data. Together the quantitative and qualitative data showed which centers are correlated to higher student engagement. The centers correlated with high engagement were analysed based on their characteristics (Table 1) and quantitative data to determine common characteristics among those centers. Chapter Four presents the results of this data collection and analysis.

## CHAPTER 4

### DATA ANALYSIS AND RESULTS

#### Introduction

The purpose of this study was to gather information about the characteristics of literacy centers associated with high student engagement in my kindergarten classroom. This year was the first year my co-teacher and I implemented literacy centers for our kindergarteners during our guided reading block. The use of literacy centers allowed us to restructure our literacy time, provided more flexibility for our guided reading groups and allowed us to meet with guided reading groups more frequently. The majority of the current research about literacy centers reviewed in Chapter Two described why independent literacy work is necessary, yet potentially problematic as students tend to be less engaged when working independently versus when under direct instruction with the teacher. There is limited research about how to make literacy centers more engaging and worthwhile, despite a common message that independent literacy work must be equally valuable to learning as literacy time with the teacher. This gap in the literature was precisely the focus of my data collection. I examined the literacy centers implemented in my classroom to examine the characteristics of centers associated with more engaging independent literacy work for kindergarteners. The guiding research question for this

study was: What characteristics of literacy centers correlate with engaged, self-directed learning?

As a result of this study, my co-teacher and I were able to examine our implementation of literacy centers in this first year, keep and enhance the literacy centers that worked well for student engagement in our classroom, and modify or replace literacy centers to better fit the characteristics associated with high engagement. Overall, the implementation of literacy centers in our classroom has been positive to provide more flexibility for and frequent meetings of our guided reading groups. In fact, at our mid-year Baseline Assessment Tests (BAS) in December, all students had shown great improvement on their reading skills (four students at level B, six students at level C, three students at level D, two students at level G, one student at level I, and one student at level J) as compared to the results at the beginning of the year (four students reading at levels B-D, one student reading at level I, and the rest pre-readers).

In this chapter, I discuss the results of this study. Both quantitative and qualitative data were collected and analyzed. The first section of this chapter examines the quantitative data, including the average percent of time actively engaged, student self-reported engagement survey results and work sample rubric results for each center. It also tallies the number of teacher interventions and technology interruptions at each center over the period of data collection. The second section examines the qualitative analysis of the literacy centers including student discussion feedback of how students felt about the centers and teacher observations of student behaviors at the centers. The final section of this chapter utilizes the quantitative and qualitative data to discuss the characteristics associated with the center with highest student engagement.

## Quantitative Analysis

The following quantitative analysis serves to determine which of the seven centers were most engaging for the students during the period of observation. Engagement is measured quantitatively by the percent of time students were actively engaged in the center, student self-reported engagement from a two question questionnaire, and work samples graded on a rubric.

**Percent of Time Actively Engaged.** Each of the seven literacy centers in this study was video recorded and observed twice over a one-month period. This design of quantitative analysis was based on the work done by Ponitz & Rimm-Kaufman (2011) who observed kindergartener behaviors in different instructional contexts, coded the behaviors, and calculated engaged minutes and off-task minutes in each instructional context.

The Read the Room center was observed with a combination of live observation and a video camera, aimed at the majority of the room, to confirm any missed behaviors. The live and video observations allowed all off-task or disengaged behaviors to be timed. If a student went to the bathroom, that time was subtracted from the total time at the center and did not count as an off- or on-task behavior. The off-task or disengaged time was subtracted from the total time each student spent at the center and the percent of time actively engaged was calculated. All students' percent of actively engaged time was averaged for each observed day. Then the average percent of actively engaged time across the two observed days for each center was calculated. The results are shown below in Table 3.

**Table 3***Average Percent Engaged Time By Center*

Center	Average Percent Engaged Time	Average Total Time at the Center (minutes)	Average Off-Task/Disengaged Time (minutes)
High-Frequency Word Hunt	94.61%	6:06	0:24
Day 1 (Nov 11, 2019)	98.06%	4:33	0:11
Day 2 (Nov 12, 2019)	91.16%	7:39	0:37
Writing Center	91.45%	13:31	0:68
Day 1 (Nov 11, 2019)	91.88%	17:00	1:27
Day 2 (Nov 21, 2019)	91.07%	10:02	0:49
Listen to a Story	88.17%	18:38	2:20
Day 1 (Nov 19, 2019)	95.50%	18:19	0:56
Day 2 (Dec 3, 2019)	80.83%	18:58	3:43
Read the Room	86.90%	13:13	1:51
Day 1 (Nov 13, 2019)	83.68%	14:05	2:26
Day 2 (Nov 19, 2019)	90.11%	12:22	1:16
Word Sort	85.32%	12:08	1:56
Day 1 (Nov 13, 2019)	83.68%	12:07	1:10
Day 2 (Nov 21, 2019)	78.95%	12:10	2:42
Pocket Chart	84.75%	7:34	1:20
Day 1 (Nov 7, 2019)	84.65%	10:33	1:50
Day 2 (Nov 15, 2019)	84.84%	4:36	0:50
Independent Reading	82.01%	10:34	2:13
Day 1 (Nov 7, 2019)	92.02%	8:53	0:36
Day 2 (Nov 25, 2019)	71.99%	12:16	3:49

*Note.* The first row of each center provides the total averages across both observation days. The centers are ordered in the table from greatest to least average percent engaged time.

The range of percent engaged time fell between 82 to 95 percent of engaged time. The centers meet Ford & Opitz's (2002) recommendation that students should be spending the majority of their time away from teacher instruction actively engaged in their literacy activities. However, the spread of these percentages helps to inform what characteristics of the centers might be linked to a slightly higher percent of engaged time when combined with other quantitative and qualitative data later in this analysis. When examining the percentages, it is also important to consider the total amount of time that went in to each percentage. For example, students spent a much longer amount of time at the Listen to a Story center (18 minutes 38 seconds) than at High-Frequency Word Hunt (6 minutes 6 seconds). This also means that while the percent of engaged time is not vastly different between High-Frequency Word Hunt and Listen to a Story, the amount of total time spent off task is significantly more during Listen to a Story (over two minutes versus 23 seconds). On average students spent about two-thirds of their independent literacy time at Listen to a Story when it was assigned.

I also noticed the 20% difference in percent of time engaged at Independent Reading between day one and day two of data collection. This was a more significant difference between observation days than any of the other literacy centers. The qualitative observations of student behavior later in this analysis provided more insight into the differences between the days.

**Student Self-Reported Engagement.** After completing each of the literacy centers, students filled out a brief, two-question questionnaire (Appendix C). The first question asked the students, "How much did you enjoy doing this center?". The students then selected a smiley face, a flat line face or a frowny face symbol. The smiley face

meant “I enjoyed it a lot”, the flat line face meant “It was okay” and, the frown face meant “I didn’t like it”. The second question asked students, “How much did this center help you become a better reader or writer?” Students selected a smiley face, a flat line face or a frowny face symbol. The smiley face meant “It helped me a lot”, the flat line face meant “It helped me a little bit”, the frowny face meant “It didn’t really help me”. The results from this questionnaire were coded to perform quantitative analysis on the data. For the first question the smiley face were coded as a three, the flat line face as a two and the frowny face as a one. The enjoyment and helpfulness responses for each center were averaged. The results of the student self-reported engagement are presented in Table 4 below. The centers are listed in order of greatest percent of engaged time from Table 3, with the highest three questionnaire scores highlighted for each question.

**Table 4**

*Student Self-Reported Engagement Questionnaire Results*

Center	Average Percent Engaged Time (From Table 3)	How much did you enjoy doing this center? (out of 3)	How much did this center help you become a better reader or writer? (out of 3)
High-Frequency Word Hunt	94.61%	2.69	2.5
Day 1 (11/11)	98.06%	2.75	2.38
Day 2 (11/25)	91.16%	2.62	2.62
Writing Center	91.45%	2.82	2.52
Day 1 (11/11)	91.88%	2.64	2.36
Day 2 (11/21)	91.07%	3	2.67
Listen to a Story	88.17%	2.90	2.54
Day 1 (11/19)	95.50%	3	2.18
Day 2 (12/3)	80.83%	2.8	2.9

Center	Average Percent Engaged Time (From Table 4.1)	How much did you enjoy doing this center? (out of 3)	How much did this center help you become a better reader or writer? (out of 3)
Read the Room	86.90%	2.60	2.86
Day 1 (11/13)	83.68%	2.6	2.9
Day 2 (11/19)	90.11%	2.59	2.82
Word Sort	85.32%	2.67	2.71
Day 1 (11/13)	83.68%	2.57	2.64
Day 2 (11/21)	78.95%	2.77	2.77
Pocket Chart	84.75%	2.94	2.73
Day 1 (11/7)	84.65%	2.88	2.75
Day 2 (11/15)	84.84%	3	2.71
Independent Reading	82.01%	2.87	2.62
Day 1 (11/7)	92.02%	2.73	2.46
Day 2 (11/25)	71.99%	3	2.77

*Note.* The first row of each center provides the total averages across both observation days. The highest three average values of the questionnaire results are highlighted in grey.

Students reported enjoying Pocket Chart (2.94), Listen to a Story (2.90) and Independent Reading (2.87) the most. Read the Room (2.60) and Word Sort (2.67) were the two lowest for student reported enjoyment. The difference in reported scores from the centers students enjoyed the most to those they enjoyed the least was within 0.34 from highest to lowest. Students reported finding Read the Room (2.86), Pocket Chart (2.73), and Word Sort (2.71) most worthwhile in improving themselves as readers and writers. They reported High-Frequency Word Hunt (2.50), Writing Center (2.52) and Listen to a

Story (2.54) as the least worthwhile. The reported scores of the centers students found the most and least worthwhile had a difference of 0.36 from highest to lowest.

When examining these scores, it is important to note that the centers students reported as the most worthwhile were not necessarily the same as those they reported enjoying the most. Pocket Chart was the only center that appeared in the top three for both enjoyment and being worthwhile. Listen to a Story was reported as the second most enjoyed center, but was one of the centers perceived least worthwhile. On the other hand, Read the Room and Word Sort were reported as the least enjoyable, but were both in the top three highest scores for students finding them worthwhile. When students rated a center as not as enjoyable but very worthwhile, or vice versa, I asked them why and wrote down their verbal responses (Appendix H). Those responses are included in the qualitative analysis section to provide greater insight into this data.

**Work Sample.** Students produced a work sample at each literacy center. In the case of the Read the Room, High-Frequency Word Hunt, and the Writing Centers the work sample was the entire activity the student was working on at the center. For the Pocket Chart and Word Sort centers students used iPads to take an image of their work and upload the image onto their SeeSaw account where I was able to examine it. At the Independent Reading and Listen to a Story centers, students produced a reader's response drawing or writing after they had read or listened to a story in their reading response journal. Only work samples that students completed and turned in during the center time were analyzed on the rubric, to remove the work that was incomplete due to time constraints. The results of the analysis are presented in Table 5.

Overall, students did very well completing their work during literacy centers. Students fully completed the assignments most frequently at High-Frequency Word Hunt (2), Writing Center (1.96) and Word Sort (1.93). Students had the most challenging time fully completing the assignment at Pocket Chart (1.28) and Independent Reading (1.68). At Pocket Chart, students sometimes did not read the poem aloud after building it, forgot to take a picture and post their work on SeeSaw, or abandoned the poem partway to move on to their next center with a peer who had already finished. For Independent Reading, students most often forgot to fill out their reading response journal. However, even those lower numbers demonstrate that the majority of students at all the centers were able to fully complete the assignments.

**Table 5***Work Sample Rubric Results*

Center	Average Percent Engaged Time (From Table 4.1)	Did the student do the assignment? (out of 2)	Did the student do the assignment accurately (for student's reading level)? (out of 2)
High-Frequency Word Hunt	94.61%	2	1.70
Day 1 (11/11)	98.06%	2	1.75
Day 2 (11/25)	91.16%	2	1.64
Writing Center	91.45%	1.96	1.86
Day 1 (11/11)	91.88%	1.91	2
Day 2 (11/21)	91.07%	2	1.71
Listen to a Story	88.17%	1.78	1.89
Day 1 (11/19)	95.50%	2	2
Day 2 (12/3)	80.83%	1.56	1.78

Center	Average Percent Engaged Time (From Table 3)	Did the student do the assignment? (out of 2)	Did the student do the assignment accurately (for student's reading level)? (out of 2)
Read the Room	86.90%	1.86	1.80
Day 1 (11/13)	83.68%	1.71	1.71
Day 2 (11/19)	90.11%	2	1.88
Word Sort	85.32%	1.93	1.86
Day 1 (11/13)	83.68%	1.86	1.71
Day 2 (11/21)	78.95%	2	2
Pocket Chart	84.75%	1.28	1.66
Day 1 (11/7)	84.65%	1.56	1.89
Day 2 (11/15)	84.84%	1	1.43
Independent Reading	82.01%	1.82	1.78
Day 1 (11/7)	92.02%	1.82	1.73
Day 2 (11/25)	71.99%	1.82	1.82

*Note.* The first row of each center provides the total averages across both observation days. The highest three average values of the rubric results are highlighted in grey.

The rubric for accuracy of student work, based on what I would expect for their reading level, highlighted a few different literacy centers. The highest accuracy was at Listen to a Story (1.89), Writing Center (1.86) and Word Sort (1.86). The lowest accuracy was at Pocket Chart (1.66) and High-Frequency Word Hunt (1.70). It was rare for a student to not complete an assignment for Listen to a Story and Writing Center that did not meet the expectation for their level of skill. A score of less than two at Listen to a Story, for students responding with a picture, usually only occurred if the picture did not

seem related to the story and a student, when asked, could not describe the connection. For students doing a written response, a score of less than two usually meant that students did not use the level of book response expected based on their skills in guided reading for their written response. Likewise, at the Writing Center, scores of less than two meant that the student did not demonstrate their known independent skills to the teacher's expectations. This was usually for the students of higher skill if they chose to just write a list of words from the flashcards instead of using them in a few simple sentences. Private verbal feedback was given to these students to help them understand how they can utilize their skills for independent writing time.

**Centers with Greatest Engagement from Quantitative Analysis.** I separated the centers with higher engagement as shown by the following data criteria:

- 1) Students spent a high percentage of time actively engaged in the center while at the center.
- 2) Students self-reported liking the activity and/or felt like the center was helpful for their skills as a reader and/or writer. The average score of question one related to enjoyment was closer to a three and/or the average score of question two related to growth was closer to a three.
- 3) Students accomplished the center task and were able to do the task accurately for their known skills. The average work sample score was closer to two.

Table 6 below demonstrates the top three centers for each of those criteria.

Centers that appeared in multiple areas of the criteria were highlighted and color coded.

Centers that appear in two or more columns are highlighted by a common color. Listen to

a Story was the third highest percentage of time engaged, the self-reported most enjoyable for students, and the second most accurate work sample. Writing Center was the second highest percentage of time engaged, the second highest center where the most students were able to fully complete the assignment, and the center where students had the most accurate work. High-Frequency Word Hunt was the highest percentage of time engaged and the center where the most students fully completed the assignment. Word Sort was rated as second most worthwhile by the students, and third highest for both completion and accuracy of the assignment. And lastly, Pocket Chart was self-reported as the second most enjoyable and third most worthwhile center by students.

**Table 6**

*Top Three Centers for Quantitative Analysis Criteria of Student Engagement*

Percent of Time Engaged	Self - Reported Engagement		Work Sample	
	Enjoyment	Worthwhile	Did Task	Accuracy
High-Frequency Word Hunt	Listen to a Story	Read the Room	High-Frequency Word Hunt	Writing Center
Writing Center	Pocket Chart	Word Sort	Writing Center	Listen to a Story
Listen to a Story	Independent Reading	Pocket Chart	Word Sort	Word Sort

*Note.* Centers that appear in two or more columns are highlighted by a common color to show their association with higher student engagement.

Looking at these data from the quantitative analysis alone, it is difficult to group the more highly engaging centers by common characteristics. High-Frequency Word

Hunt, Writing Center, Listen to a Story, Pocket Chart and Word Sort do not have any of the predetermined characteristics in common across all of them. All but Pocket Chart, however, share the sedentary characteristic and Pocket Chart has a balance of greater movement in a singular space of the room which is different than the movement characteristic of Read the Room.

The next section will describe the engagement findings through my qualitative analysis, in the form of observations and student verbal feedback. Together the quantitative and qualitative data are used to analyze characteristics of engaging literacy centers in my classroom.

### **Qualitative Analysis**

The qualitative analysis in this section serves to provide more context and understanding of how students were engaging with each literacy center and what center characteristics may have been more engaging to the students or helpful to their success. The qualitative data is in the form of observations done through the video recordings while students were at the centers and student feedback during the whole group student discussion, and comments students made when filling out the self-reported engagement questionnaire.

**Observations.** The following data was collected during multiple viewings of the recordings of each center over the observation period. I looked for patterns of behavior related to engagement or disengagement, as well as surprises or unexpected behaviors. I paid special attention to how students approached the centers through the lens of the center characteristics: social versus independent, movement versus sedentary, consumption versus production, creative versus skill practice, and technology versus no

technology. I also noted any additional factors that may have influenced student engagement, such as proximity to other centers, proximity to a teacher or the number of students at the center at the same time. Below, an overall observational analysis of teacher intervention and technology distractions or problems at the centers as well as the observations from each literacy center.

***Teacher Intervention Occurrence at the Centers.*** Ideally, literacy centers are able to run with little to no teacher interventions or interruptions. Once a center is fully implemented and practiced, students should feel empowered to do the tasks and know how to troubleshoot minor issues independently without the need for teacher assistance (Diller, 2015; Fountas & Pinnell, 2017a). A center that requires a lot of teacher intervention is not doing its purpose of engaging students away from the teacher so the teacher can run guided-reading groups and are also not an effective use of student time away from the teacher. Those centers likely have some characteristics that are not as engaging for students and need to be examined so they can be improved or removed. Table 7 below demonstrates the total number of teacher interruptions or interventions that were observed at each of the centers across all of the data collection days. The interventions or interruptions could be teacher reminders about behaviors or voice levels, problem solving disagreements among students, technology help, or a student wishing to share something with the teacher. When looking at the numbers, it is important to remember that during Literacy Centers there were three teachers in the room that could respond to behaviors or be asked questions by the students, which likely led to higher numbers of interruptions or interventions.

**Table 7***Number of Teacher Interventions/Interruptions at Each Center*

<b>Center</b>	<b>Number of Teacher Interruptions</b> (Totals across all observation days)
Independent Reading	4
Pocket Chart	10
Listen to a Story	10
High-Frequency Word Hunt	11
Writing Center	16
Word Sort	20
Read the Room	21

Upon examining the number of teacher interruptions during data collection, there is a correlation to the proximity to a teacher leading a guided reading group. Independent Reading is in the library nook of our classroom, out of eye shot of two guided reading meeting areas and relatively far away from the third guided reading area. Writing Center, Word Sort and Listen to a Story were on either side of the table where my co-teacher meets with her guided reading groups. Students doing Read the Room walk around the whole room and so are in close proximity to all of the teachers at various times. I was also recording behaviors live and giving my full attention to the students doing Read the Room. While I did my best to be a passive observer, students were more tempted to come up and show me their words and ask me questions because I was not engaged with a guided reading group. There were also a handful of significant disagreements between students or behavior disruptions that I did choose to interrupt while observing, because I

felt I would have also intervened when teaching a guided reading group. Most often, however, interruptions during Read the Room were students approaching a teacher wanting to share how far along they were with finding words or a cool word they found, ask if they had done enough, or ask for help finding an additional word. From these observations, students participating in Read the Room seemed to have the most difficulty maintaining independence and productivity away from the teacher.

Teacher interruptions also occurred when students did not know what center they were to do next. Though these interruptions were not tied to a particular center, the success of students to independently navigate their activities away from the teacher is integral to the overall success of literacy centers. All students were walked through the chart and the literacy center labels. We gradually introduced the chart by students practicing figuring out and doing one center, then two and then three. The majority of students mastered viewing the literacy centers chart, finding their name and going down the list of centers represented by pictures and words. A handful of students occasionally accidentally skipped or forgot a center. Three students, however, repeatedly needed support to understand the chart and their assigned centers. Even if a teacher individually walked through reading the chart before literacy centers began they still sometimes had to interrupt a guided reading lesson to know what to do next.

Lastly, my co-teacher, our literacy specialist and I experienced interruptions during guided reading from the students in our guided-reading group expressing concern about getting their center work done. Though students were given the expectation that they may not get to all of their centers and any work they started but did not complete could be placed in the “Not Quite Done Yet” bin to be completed at a later date, students

felt strongly about completing all of their centers that day. Students asked, “Are we done yet?” or commented, “This is taking a long time, I need to do my centers,” instead of staying present with us in the guided-reading lesson. This is direct evidence that centers as a whole were very engaging and important to the students, however it became a challenge for guided reading to run effectively. If students were only assigned to two centers, they usually were less distracted by the centers during guided reading. With only two assigned centers, however, the choice of a third center proved difficult for some to regulate themselves. Three centers was almost always the right amount of centers for the time students had to complete them when working appropriately, but was associated with more of the distracted comments especially from the students with earlier developing skills.

***Technology Distractions or Problems.*** Pocket Chart, Listen to a Story, and Word Sort all required use of technology for a portion of the center time. After observing the behaviors of students at these centers, I also recorded how many times the technology seemed to hinder the success, engagement or ability for the student to move forward within the center. This hindering may have been due to a problem with the technology, a student not knowing how to accomplish a task with the technology, or a student choosing to do something outside of the assignment with the technology (go to a different app, scroll through their SeeSaw account history, etc.). Students were able to troubleshoot the technology on their own, with a peer, or required teacher support (those interruptions needing teacher support are included in the previous section and Table 7). Table 8 demonstrates the total number of technology distractions or problems across the data collection days for each center.

Word Sort and Listen to a Story required the most steps for students to do in order to engage with the technology successfully. In Word Sort, after reading their sort to a peer, students had to get out an iPad, open the SeeSaw application, add a new post, take a picture of their sort, record themselves reading the sort, select their name, and save the post. Some students were able to remember the steps with the visual cues easily after a few repetitions, while others continued to need support from a peer or a teacher to successfully do a post. Once the post was saved, SeeSaw automatically brought them to their SeeSaw class portfolio which was very tempting to begin to scroll through instead of putting their materials away and moving on to the next center. There were also many additional features that can be used to add drawings or pictures within pictures to their SeeSaw post which students sometimes began exploring.

**Table 8**

*Number of Technology Distractions or Problems at Centers Utilizing iPads*

Center	Total Number of Technology Distraction/Problem Across the Observation Days
Pocket Chart	7
Listen to a Story	18
Word Sort	21

Likewise, at Listen to a Story, after locating all the necessary materials, students needed to open the QR code scanner, ensure the scanner was ready and did not already have a webpage loaded (fixed by clicking the “Done” link in the upper corner), correctly hold the iPad to scan their desired book, and press play on the video. It was also important that they held the iPad horizontally to be able to see the full video and text that

usually showed at the bottom edge of the video. Some students did not remember and became frustrated that they could not see the full screen or the words. However, the bigger technology distraction at Listen to a Story was students becoming distracted by their peer's screens when they first arrived at the center or after their story finished when they were working on their response or cleaning up.

***High-Frequency Word Hunt.*** When designing the High-Frequency Word Hunt center for our classroom, the characteristics associated with the center were independent, sedentary, involve consumption of a text, skill practice, and have no technology involved. The printed-out books utilized for the star word hunt were either Level A-C books from Reading A-Z with repetitive, simple text or from shared readings that we had read together as a class before the students worked with the text independently. The execution of this center ran for the most part in alignment with the anticipated characteristics. Key findings from the observations include:

- Skill practice and simple design helped students feel confident, successful and more engaged.
- Students chose if they would do the center independently or with a partner, adding both a social and a choice characteristic that was associated with engagement.
- Some students exhibited more off-task behaviors when the task became more challenging.

The High-Frequency Word Hunt was one of the first centers introduced to students. We practiced doing High-Frequency Word Hunts as a whole group during shared reading, students did it in partners, then as an independent activity with teacher

support, and finally as an independent center activity. The students participating in High-Frequency Word Hunt on the observation days of this study appeared very confident in the center's process and their ability to complete the center (Brophy, 1987). They selected a paper book from the five to six choices available, got a crayon from their supply bucket, and sat down at a table to get to work. About half of the students also got their chart of high-frequency words and set the chart beside them as they began to hunt. Other students frequently glanced up at the classroom high-frequency words posted on the wall. Students were able to actively get to the task of finding words almost immediately after sitting down at the table. The center took students about five to ten minutes in duration, depending on the length of the book.

The opportunity to choose to make this center more social or keep it fully independent worked well to allow students to independently differentiate how they engaged with each other at the center based on their own needs. The most common choice students made was to sit at a table with other students also working on their word hunt rather than an empty table or a table of students doing a different activity. Some students would even move to another table with others working if their peers finished up and left the table in order to be with others working on the same task. They enjoyed showing other students the words they found, asking questions such as if a word was a high-frequency word or not, or reading sections of the books aloud to each other. At the same time, there were students who chose to sit by themselves at an empty table, tune out any activity around them, and work in silence or whisper words to themselves. Those students did not want to talk to their peers about the book or the words. Those same

students were the ones that would occasionally ask the teacher to quiet the room or select to use noise cancelling headphones while working.

The small amount of off-task or disengaged behaviors at this center occurred more frequently on the second observation day than the first. When considering this observation, it is important to note differences in context from one day to the other. First, on the second observation day, the tables were being used for another task in addition to the High-Frequency Word Hunt, whereas on the first observation day only students doing High-Frequency Word Hunt were using the tables. Also on the second day, students were all working on their own copy of a shared reading text that was longer and had more words per page instead of a simpler text that they got to choose from a selection. In addition, we had introduced several more high-frequency words for students to hunt for between the two observation days, so there were more words for the students to keep track of. This led to more desire to appeal to a teacher for help or clarification and potentially more frustration or not feeling confident in the potential of success at that center (Brophy, 1987). As the task became more challenging or was perceived to be more challenging, students lost confidence in their independent skills and became less engaged with the center.

In observing the work samples, students were very successful at completing the assignment (2/2) but had the lowest accuracy (1.7/2) of the centers. If students missed more than five high-frequency words in the text, I marked the accuracy as a 1. Sometimes students missed a whole page or two and did not realize it as they were turning the pages. Other students did not realize that a word was a high-frequency word or forgot a word as the list of high-frequency words became longer. As I consider this in terms of

engagement and student success, I do not think it was because students were disengaged or not utilizing their known skills. First, this was the only center where I had a subjective numerical line between a 1 and a 2 for the rubric. Second, keeping track of a list of words, comparing the list to sentences on a page, and remembering to double check that they have completed all of the pages are all developing skills for kindergarteners.

The skill practice at this center measurably developed confidence in reading and identifying high-frequency words in and outside the classroom. I observed in the classroom, and parents reported from home, that students frequently exclaimed that they found high-frequency words in books, on the walls, or on road signs. When assessed at the end of the first trimester, the majority of this year's students could correctly read all of the high-frequency words they were taught, a larger number than last year at the same time (though this fact cannot necessarily be directly linked to the use of the High-Frequency Word Hunt center).

***Writing Center.*** The design of the Writing Center included the characteristics of social interaction, sedentary, production, creative, and no technology. Students had a choice of several different writing options including: Draw and Write Words pages, books with "picture frames" for illustrating and lines for writing, blank books, single journal pages, and folded paper to use as cards for writing notes to family or friends. At the table were word and picture cards that changed thematically with our dramatic play areas and social studies units, as well as a three-ring binder with pictures to prompt their imagination for story ideas. High-frequency word charts and alphabet charts were also visible and available for students to use. Key findings from the observations detailed below include:

- Social interaction was a very important characteristic associated with student engagement
- Being able to produce their own work was very important to students
- Students seemed to enjoy the creativity characteristic, but sometimes had a difficult time coming up with ideas
- Increased student ability to problem solve independently over the course of observation

It was at this center that I overheard the most interesting peer to peer conversations about words and their writing. Students demonstrated the CORI attributes of engagement through their use of social interaction, cognitive strategies, and motivation to write (CORI: Reading Engagement Project Overview, 2019).

Almost all students had productive social interactions while at the Writing Center. Students shared their work with each other and discussed the words or the story they were writing. A few students were stuck when they first came to the center. They asked a peer, “What should I do?”, and the peer made a suggestion or showed them their own work to spark an idea. One day, two students chose to write as partners. They utilized a poem we had read-aloud in class and came up with their own ideas in a similar pattern to the mentor text. The students each produced their own work but helped each other come up with ideas for each line of the poem.

Students helped each other sound out words and discussed spelling. Because students took varying amounts of time at the Writing Center, it was common for students of various skill levels to work at the Writing Center at the same time. “How do you write \_\_\_?” was often asked around the table. When the Writing Center was first implemented,

students wanted to go find a teacher to help them word-solve. As students became more experienced at the center, they realized teachers weren't able to help them during guided reading times and began using their peers as resources. A couple of students who were confident in their spelling would just spell the word out for their peers. Other students would mimic what teachers do in response to that question and help their peers stretch out the sounds of the word into the individual letter sounds. This sometimes led to back and forth discussions about what letter went with the sound. Students also reminded each other where they could find that word with the word cards or elsewhere in the room, referencing skills and words they had noticed from their time at the Read the Room center.

The high level of social interaction at the Writing Center sometimes led to teacher interruption because students would begin raising their voice volume due to the number of conversations at the table. The Writing Center was in close proximity to my teaching partner's guided-reading table as well as the Pocket Chart center. Several of the teacher interruptions occurred during great on-task social interactions that had become too loud and distracting for the guided-reading group and other students working.

The students who were not social or only minimally social were also usually the students who sat by themselves. The first reason a student sat by themselves was that he or she arrived at the Writing Center when no other students were present. The second reason was that all the chairs around the Writing Center table were occupied when he or she arrived and they needed to grab a clipboard and sit on the floor. Sitting on the floor also limited student access to the word cards and picture prompts, as they were less likely to ask their peers at the table to share with them than the students also sitting at the table.

Students seemed to really enjoy producing their own original work and the ability to choose what kind of writing they would do that day. This observation is supported by their feedback in the student discussion, detailed in the next section. Several students started by choosing only the Draw and Write Words page, where they wrote four words and drew pictures to match, and then gradually started to choose blank books or cards to write in. This growth in confidence could also be seen during whole group writing activities we did at other times in the day. Starting in mid-November, my teaching partner and I began to notice that students of all abilities were no longer waiting for teacher support to begin a writing activity. Instead, they immediately started on their own and both my teaching partner and I were able to float around the room to do quick check-ins instead of having to provide more significant support through the writing. It is difficult without an experimental research design to know if the increased confidence in whole group writing can be directly attributed to the center work; however, I do believe, based on the observations and student feedback, that the opportunities to be independent with their literacy skills, especially at the Writing Center, have helped the students see themselves as writers.

As students began to do more of the blank books, some began to feel frustrated that the Writing Center was taking them a long time or that they weren't able to finish what they started in one session at the Writing Center. They didn't want to put the work in the "Not Quite Done Yet" bin because they had worked so hard on it and wanted to show the teachers and they also wanted to finish it later. After checking in with those students about why they felt frustrated, we allowed turning in partially done work to get encouragement and feedback from us before completing their writing next time at the

Writing Center. This worked particularly well for our higher level students who were working on more complex stories. We could write a question or two in the margins to help prompt details or further thinking about their story.

Another area of growth I witnessed across the two observation days at the Writing Center was the ability of students to independently solve problems. On the first observation day, two students had a very difficult time getting settled into the Writing Center. Both students took a long time to select a writing choice and had a difficult time accepting that the chairs at the table were all occupied and they needed to get a clipboard. On the second observation day, one of those students was presented with the same clipboard problem, but this time that student got settled with the clipboard immediately. Further, the student had wanted to choose a blank book, but all the blank books had been taken. It only took the student a few seconds to switch gears and select a Draw and Write Words page instead. Another student on the second day was presented with a similar problem, having wanted a blank book, and also independently made a different choice within a few seconds.

Off-task behavior at the Writing Center fell into a few categories: distracted by watching other centers or guided reading, distracted when going to get supplies, and off-task social interactions. The off-task behavior of looking about the room and watching guided reading or other centers was challenging for me to classify as on or off task. This was the most common off-task behavior in the Writing Center. As an observer, it was difficult for me to tell what was going on inside those students' minds as their eyes wandered or seemingly spaced out. Were they thinking about their writing by looking around or were they disconnected from the Writing Center? It fell outside the realm of

the expected engaged behaviors that were outlined in the methods section, so I decided to mark it as an off-task behavior when timing it. When students wanted to add illustrations to their writing, they needed to walk across the room and get their own supply bucket. While they would usually start out focused on getting their crayons, several students became distracted by peers or forgot what they were doing and started to wander. This also happened for a student who needed to get a clipboard to work on the floor. Sometimes these students would take over a minute to return to their writing. Lastly, while the majority of the social interactions were productive, students occasionally got silly with each other at the table talking about something that had happened or making loud noises. These behaviors were usually met with teacher redirection if they persisted for longer than 10 seconds.

*Listen to a Story.* The characteristics integrated into the design of the Listen to a Story center were independent, sedentary, consumption and production, creativity and technology. Before starting the centers, I anticipated that this center would be very enjoyable for the kindergarteners. This anticipation came from the idea that listening to and following along with a story of their choosing would support students who were just beginning to develop their reading skills to feel successful and independent. Key findings from the observations detailed in this section include:

- The steps involved in getting started at this center, mainly the use of the QR code book and technology, proved challenging for students.
- Students enjoyed the sedentary characteristic and being able to rest their bodies in many ways while listening.
- The choice of which story they listened to was meaningful to students.

At this center, the students gathered their headphones, an iPad, their reading response journal, a pencil, and a clipboard to begin. They could then browse for a book in one of two three-ring binders we had with a wide selection of read-aloud books. Once they selected a book, they scanned the associated QR code, wrote down the title in their reading response journal, and began to listen. This turned out to be a lot of steps for kindergarteners to accomplish successfully.

I observed that it took students several minutes to actually get to the listening and following along portion at Listen to a Story. The average amount of time spent listening for the observed students was six minutes and twelve seconds. The behaviors students were doing during this time were most often obtaining the necessary materials (headphones, iPad, response journal, clipboard and pencil), looking through the QR code book to select a story, waiting for one of the two QR code books to become available from another student, writing the title of the story in their response journal, or troubleshooting the QR code scanner if the previous user had not closed out of the story website. Though these are not off-task behaviors, most of them aren't behaviors that help students' growth in literacy and I must ask whether this center can be improved so it better meets the center objective of being meaningful instructional time away from the teacher (Ford & Opitz, 2002; Mariott, 1997).

Sharing the QR code books was very challenging for students and a disagreement over the QR code book was the most common reason for off-task behavior or teacher intervention during this time. Part of this issue was that students had a difficult time locating the title of the book on the iPad screen, so they needed to copy down the title from the QR code book. I did not anticipate that issue when deciding to only have two

QR code books for students to share. The first two students at the center would choose a book and scan and write the title without much difficulty. However, other students that arrived would wish to look at the QR code book and fight with the first two students about who could use it.

The second most frequent need for teacher support was technology troubleshooting with the QR code reader. Here the technology characteristic was challenging when getting started. The most frequent need was if the previous user of the iPad had forgotten to click the “Done” link in the upper corner of the QR scanner after they finished watching their video to return to the main scanner page. Though they had been taught how to close out and troubleshoot this issue, students had a very difficult time remembering and locating the small “Done” link. Other common issues were difficulty remembering which app to use to scan the QR code, volume control, and websites needing to be refreshed if a video froze while playing.

Additionally, my teaching partner, the literacy specialist, and I all experienced difficulty when starting our second guided-reading group of the time block if any of those students were still completing Listen to a Story. Stopping a story before it had finished was a challenge for the kindergarteners. It frequently took several minutes of a teacher telling the student it was time for guided reading before the student had stopped the story, put away materials and joined his or her guided-reading group. They also then felt frustrated that they could not complete their response journal. The difficulty in stopping was understandable, but made for problematic transitions and loss of instructional time.

Positive observations of Listen to a Story included the way students engaged with the sedentary characteristic of this center. Students seemed to enjoy being able to be in

different positions than they usually were throughout the school day. Students could lie down, squat, or rest in other various pretzel positions that feel different than sitting in a chair or cross-legged on the carpet. Once settled in the story, the students' bodies were very calm and quiet. The ability to fully relax their bodies was different than any of the other centers.

Additionally, once students pressed play on the story, they were generally very focused on listening to the story they had chosen. Here again, the element of choice was meaningful to them. Some students liked that they could find a familiar book that they had read at home and listen to it again. Others enjoyed that they could find a book they had never seen or heard before. A few pairs of students brought in a social element to Listen to a Story by picking the same book as a peer. This allowed them to talk about the story when they were done and were working on their responses.

***Read the Room.*** The Read the Room center had the following characteristics built into its design: social interaction, movement, production, skill practice and no technology. Students walked about the room with a pencil, clipboard and Read the Room sheet, looking for words starting with certain letters which were determined by the sheet they chose. When they found a word that started with one of the two letters on their sheet, they sounded it out and then wrote it on their sheet. The observations for this center were done live, as no video camera angle could effectively capture the whole room or record the audio of students walking around the room. I did keep one camera up on the majority of the room to rewatch and double check my live observations when students were visible in the frame. Key findings from the observations detailed below include:

- Students took pride in the production element of this center; they enjoyed writing the words they found.
- About half of the students chose to do the center with a partner (social) and were more engaged in the task with their partner, half of the students chose to complete the task independently.
- The movement throughout the whole classroom was challenging for many students, as they were presented with a lot of potential distractions as they moved about the room.

Students showed excitement when finding words that started with the appropriate letters around the room. Their faces lit up, they hurried their walking over to the word and pointed to it with their pencil as they word solved it or said it aloud. This was especially true for students just developing their literacy skills. One student commented, “Finding the words does help me read. I use my eagle eye!”(Appendix H). Students not only used the labelled objects, posters, alphabet charts and displayed work in our room, they also used the books in our classroom library and the word cards at the Writing Center to find words. This helped them become familiar with words in many contexts in our classroom. They felt proud of finding the words and writing them.

The production, or writing, seemed to be the favorite part of the center. The skill practice of writing letters helped students see themselves as writers. The majority of the comments students made about Read the Room (Appendix H) were about how much they enjoyed writing the words. Several students took extra pride in finding extra words beyond the four required for each letter.

About half of the students took advantage of the social characteristic of this center. A couple of students walked around the room together and kept an eye out for each other's letters as they worked. Others would inquire to their peers if they had seen any words that started with one of their letters or tell a peer that they had found one that would work for him or her. Frequently after writing a word, many of the students wanted to show the word they found to a peer or a teacher.

Like the Writing Center, it was difficult to determine through observation whether certain behaviors were productive and engaged or off-task. Some students would walk around the room without any focus to their gaze, sometimes also playing with their clipboard. Other students changed their movement to skipping, dancing or crawling around the room. It may be possible they were looking with a softer focus or thinking about where else to look in the classroom. I used the focus of their eyes to determine the level of engagement. If their eyes were still actively observing I did not count the behavior as disengaged. However, I counted it as disengaged if it appeared the students were more likely wandering aimlessly rather than looking for words, especially if the wandering was followed by becoming distracted by the iPads at Listen to a Story, other off-task social interactions or fighting.

The movement part of Read the Room was challenging for some students to remember personal space and staying safe as they moved about the room. Student comments during the engagement questionnaire often reflected that walking around the room was "tiring" or "boring for [their] legs" (see Appendix H). Only one student reported that the walking around was what made this center fun. This was a surprising

response for me, as I anticipated the walking and movement opportunity to be more highly valued by the kindergarteners as a whole.

**Word Sort.** The Word Sort center was designed with social, sedentary, production, skill practice and technology characteristics in mind. At the time of observation students had learned how to do Word Sorts with the Words Their Way program. The day before or a few days before Word Sorts would be assigned as a center, students received new, differentiated sorts. After a mini lesson in their groups with the new words, they had the opportunity to sort and read the words to a teacher before doing the sort as an independent, center activity. For the center activity, students got out their Word Sort notebook and went to the rug. They individually sorted their words and then asked a peer to listen to them reading the sort out loud. After listening, the peer gave them a star with a marker on the page. Then the student got out an iPad, opened up the SeeSaw application, took a picture of their sort, recorded their voice and posted their work. Key findings from the observations discussed below include:

- Students were confident in doing the task independently, as it was skill practice and each new sort is introduced first with the teacher.
- Students exhibited high engagement when sharing their sorts with each other; social interaction was valuable.
- The use of technology was difficult due to many navigation steps on the SeeSaw application.

The students began their tasks at Word Sort with confidence. The sorting routine was well established and students all had phonics sorts at the right level of difficulty for their skill sets. When students were involved in the active sorting portion of this center

they were very rarely off task. Students whispered the words or pictures out loud or read them silently to themselves as they selected the appropriate column in their sort.

Occasionally a student would forget a word or a picture and would ask a friend; students did not appeal to a teacher for support for this during the sorting.

Students also seemed to really enjoy the social interaction built into the design of the center. The listening students were focused on hearing all of the words of their peer's sort and frequently even followed the model of the teachers, asking questions about what letter all of the words started with or what word family in each column. This practice gave opportunities for students to listen to different sorts than their own. It provided both review, stretch, and exposure opportunities for all students. A few students doing the same sort chose to pair up and be social during the sorting process. They had conversations about their words, especially those students that had more complex, advanced sorts with different vowel sounds.

The ability to use the "teacher markers" to give a star to a peer was especially fun and inviting for the students. For some, however, the draw of being a listener did become a distraction. Some students would arrive at Word Sort and immediately grab a marker waiting for someone to read to them and delay getting started on their own sort. Two students got into a disagreement that required teacher intervention about how long a student could hold on to a marker if they weren't actually with a partner yet. A few other students cleaned up their sort when they were done, but then sat down again and waited for one to two minutes to see if they could listen to anyone, instead of moving on to the next center. At times there was confusion about how to partner up and who got to use the marker. Students looking for a partner frequently said, "Can you read to me?" instead of

“Would you listen to me?” which caused confusion when their peer responded, “I already read.” Most often, however, students understood the meaning and happily grabbed a maker and began listening.

The most difficult part of this center was the involvement of technology. After students read to a partner they were to pick up an iPad to take a picture and record their voice. The post to SeeSaw served as evidence of participating in the center or work sample. Though students said that they loved getting to record and hear their voice on SeeSaw (see the Student Discussion Interview section below), the posting process was a challenge. There are several steps to posting a voice recording and picture to SeeSaw, and even with a tutorial, several practices, and a picture guide to the process, three students consistently got lost part way through the process. Those students were rarely able to successfully post their work. Others would occasionally forget to do the post, remembering only after cleaning up their sort or with help from a friend or teacher reminder. Those students then went back and sorted again in order to post to SeeSaw. Before or after posting, several students became distracted by scrolling through our classroom SeeSaw “feed” with pictures of past work and events. Two students also chose to then take other pictures with the iPad rather than complete their task and move on to their next center. I am forced to consider if the photo evidence of the work is needed when the involvement of technology proved so difficult and took away from student independence and ability to move on to the next center.

***Pocket Chart.*** The Pocket Chart center was designed to be social, involve some movement, production, skill practice and technology. Students put words and phrases of known songs or poems into the correct order in the Pocket Chart with a partner, then read

it out loud before taking a picture and posting the poem to their SeeSaw account. Key findings detailed below include:

- Technology use was problematic due to arguments with student partners about who handled the iPad and keeping track of the steps to post their work on the SeeSaw application.
- Social interaction worked well if partners arrived at the same time, but was difficult if students arrived at different times.

The combination of partner work with technology proved especially difficult at Pocket Chart. Students argued with their partners over who would hold the iPad to take a picture. My co-teacher and I had originally assigned students to both take a picture and record their voices reading the poem or song together. The recording and extra steps to posting proved difficult enough that we removed the recording portion from the assigned tasks at the center. Over half of the teacher interruptions at Pocket Chart were due to technology troubleshooting or student arguments over the technology. Unfortunately, without the voice recording, some students chose to never read the poem or song aloud with their partner after having completed the work. For some, this meant they did not catch some errors in their word order.

If students arrived at the Pocket Chart at the same time, the partner work and social characteristics of the center worked very well as they sorted the words and phrases. Students would sing the song, recite the poem, or reference the “big book” text we use when doing the songs or poems as a class. Having a partner to then locate the next word or phrase together seemed to keep students engaged even if they hit a tricky part. This was especially true for students with beginning reading skills, as the process of

remembering a song and finding the words and phrases that matched the sounds was overwhelming when the students were on their own. Color-coded sentences and pictures to go along with key vocabulary in the poem assisted the success of the beginning readers, but the best resource was a partner to persevere with. A handful of students added additional production to the Pocket Chart center by grabbing a clipboard and pencil and writing out the entire song or poem after they had put the words and phrases in order.

Students had a difficult time with the social characteristic of this center if they arrived at slightly different times. There were two different poems or songs available at the Pocket Chart center. If a student had already begun working with one choice, the new arrival would sometimes have a hard time not having the ability to choose the song or poem they preferred. Those students were hesitant to start and exhibited more distracted and disengaged behaviors as they went, sometimes not finishing the task before moving on. It was also sometimes socially difficult for students to use their words to ask if they could join a classmate who had already begun. For example, if two students had already started and a third came to do the center they would sometimes just stand back and watch for a minute or two before disappearing off the camera lens. Often those students would return a few minutes later, likely off-task for those minutes out of view, though two students never returned to do the center.

One last challenge of this center was students forgetting to take out the words and phrases from the Pocket Chart before leaving the center. This was also confusing to students arriving at the center, as they did not know if the student working had gone to the bathroom or if they were done. Several times the arriving student would clean it up

only to be greeted by an upset classmate who had just returned from the bathroom and was not done. More frequently, however, the previous student was done but without having cleaned up the next student would go to the teacher to inquire if they could do the pocket chart rather than being able to begin independently.

***Independent Reading.*** The Independent Reading center presented the kindergartners with an opportunity to independently read books of their choosing and write or draw a response to one book. The characteristics associated with the design of the center were independent, sedentary, consumption and production, creative and no technology. For the center, students retrieved their book bins and settled in to a spot in our classroom library on the couch or in a portable floor chair. These books are of a variety of skill levels, from wordless books, to easy text, to more advanced picture books. Students can browse the library by subject, with multiple levels of books in each subject bin. Key findings from the observations discussed below include:

- Transitioning into Independent Reading was difficult for about a third of the students, due to off-task conversations, loud noises, and personal space management.
- Social interaction worked well for about half of the students, especially beginning readers, to help word solve together.
- About half of the students chose to read completely independently without any social interaction.

As noted in the quantitative analysis, Independent Reading had a significant difference in percent of time engaged from the first and second observation days. In examining the behaviors between the two days, the behaviors that made the biggest

impact on disengaged behaviors were disagreements between students, especially in regards to personal space. The six students involved in these behaviors, of the thirteen who engaged with the center on the second day, significantly lowered the average percent of time engaged. These students never fully settled in to looking at or reading their books, paying much closer attention to the social dynamics going on around them. In looking at the larger context of the second day, it was the day before a special schedule day and two days before Thanksgiving Break which definitely could have affected student self-regulation skills.

Interestingly, there were other students in Independent Reading at the same time that were able to tune out the off-task behaviors and stay fully engaged in their reading. These students settled into their spots and selected books from their book bins. Many students whispered, read aloud, or slowly sounded out words using their word solving skills. Others read silently, only breaking their stream of reading to share a cool page with a friend sitting next to them.

About half of the students engaged in social learning during Independent Reading. Examples of positive social interaction included sharing a page they liked with a friend sitting next to them, asking for help on a word they couldn't solve, sharing that they had also read a book a classmate was starting and sharing how much they had liked it, and discussing books with one another while writing or drawing in their response journals.

**Table 9***Summary Table of Key Findings from Center Observations*

Center	Characteristics/Elements Positively Associated with Student Engagement	Characteristics/Elements Negatively Associated with Student Engagement
High-Frequency Word Hunt	<ul style="list-style-type: none"> <li>● Choice to be social or independent</li> <li>● Feeling of confidence with skill practice/simple design</li> </ul>	<ul style="list-style-type: none"> <li>● If task felt too complex, students disengaged from the task</li> </ul>
Writing Center	<ul style="list-style-type: none"> <li>● Social learning, discussions of language</li> <li>● Production, creativity and choice of writing activity created a sense of pride in student work</li> <li>● Growth of independent problem solving abilities</li> </ul>	<ul style="list-style-type: none"> <li>● Disengagement if students prevented from social interaction by the amount of table space.</li> </ul>
Listen to a Story	<ul style="list-style-type: none"> <li>● Sedentary and choice of resting/sitting position</li> <li>● Having a choice of story was meaningful to students</li> </ul>	<ul style="list-style-type: none"> <li>● Too many steps to set up the iPads to start listening (technology)</li> </ul>
Read the Room	<ul style="list-style-type: none"> <li>● Writing the words, production, valuable to students</li> <li>● About half of students worked with a partner (social)</li> </ul>	<ul style="list-style-type: none"> <li>● Movement in a large room was difficult, lots of distractions and felt tiring to students.</li> </ul>
Word Sort	<ul style="list-style-type: none"> <li>● Students confident in the task (skill practice and preparation)</li> <li>● Students very focused when sharing sorts with one another (social)</li> </ul>	<ul style="list-style-type: none"> <li>● The steps of using the technology were difficult to remember and often distracting.</li> </ul>
Pocket Chart	<ul style="list-style-type: none"> <li>● Working with partners (social) worked well when arrived at the same time</li> </ul>	<ul style="list-style-type: none"> <li>● Technology use led to peer arguments and pulled focus away from reading together</li> <li>● Social element difficult when partners arrived at different times</li> </ul>

Center	Characteristics/Elements Positively Associated with Student Engagement	Characteristics/Elements Negatively Associated with Student Engagement
Independent Reading	<ul style="list-style-type: none"> <li>Choice of social or independent work. Beginning readers worked well when word solving together, others worked well when independent</li> </ul>	<ul style="list-style-type: none"> <li>Transitioning in to Independent Reading difficult for about a third of the students due to off-task conversations, loud noises, and personal space management</li> </ul>

**Student Discussion Interview.** After the observation period, students participated in a recorded whole group discussion about the literacy centers. The discussion was guided by the student discussion interview questions (Appendix E) and was about half an hour in length. Students were asked to share about centers they enjoyed the most, centers they found frustrating or more difficult to complete, what it was like to work with classmates at centers, and whether or not they thought the work they did at literacy centers was important.

The first question of the discussion asked students to share the center that they enjoyed doing the most and why. All of the centers came up in the discussion as favorites except the High-Frequency Word Hunt. Characteristics of production and choice were important to students in their reasoning. They also enjoyed centers that did not feel too challenging. The Writing Center had the most student responses describing why they enjoyed it: “I like getting to choose what to write”, “I get to make pictures and write stuff. I like projects and doing art.” and “I like writing words and I also like some things helping me.” When asked, students also agreed that they were more confident writing independently on other class writing projects because they knew they could write independently at the Writing Center. Production was also important to students for Read

the Room, Independent Reading and Listen to a Story. The response journal was repeatedly stated as the favorite part of both Independent Reading and Listen to a Story. This fact was interesting to me, as I expected more students to say they wished they didn't have the extra step of the response journal. Students stated that the ability to choose which poem they wanted to do at Pocket Chart and which writing activity they wanted to do for the Writing Center also made those centers favorites. It is interesting to note that the ability for students to choose what book they selected for High-Frequency Word Hunt, listened to at Listen to a Story or read for Independent Reading did not come up in the student comments or reasoning. Lastly, students stated that Word Sort was a favorite because it felt "easy" and they felt they could easily read the words. When asked, students agreed that one of the reasons it felt easy to them is the fact that they do the sorting independently only after they have done it once with the teacher a day or two earlier. Again, I found this response interesting as many students reported not enjoying Word Sort as much in the self-reported engagement questionnaire (Appendix H) because it was hard and a lot of work to do the sort.

Conversely, students were asked about which centers felt frustrating or difficult to finish. Here the diversity of student opinions brought up some of the same centers previously shared as most enjoyable. Read the Room had the most comments about why it was difficult or frustrating: "You have to find words [that start] with certain letters. That takes a long time.", "It is tiring to walk around.", and "You have to keep writing and my hand hurts." Here the characteristics of movement and production were seen as less desirable to these students. Similarly, some students reported that the production at Writing Center could feel frustrating if you were trying to write a story because "it takes

forever” and “you can’t finish”. At the kindergarten developmental level, not being able to fully complete a task in the time provided can feel very frustrating and it is difficult for students to remember they can come back to something they already started another time. The “Not Quite Done Yet “ bin was helpful, but did not alleviate all of the frustration of not being able to complete all tasks within once literacy centers block. Lastly, some students reported that Word Sort was the most difficult because reading words was hard though it was “fun to read to a friend”. Those students felt very differently than the students that reported Word Sort as enjoyable and easy. For these students, the redeeming characteristic of Word Sort was the social characteristic. Students were drawn to and frustrated by different centers due to their different skill sets and personalities. Overall this points to the fact that student engagement for a diverse group of students, preferences and skills requires that a variety of center characteristics be included in the center design with proper balance.

When asked if they thought the work they did at the Literacy Centers was important, nine students said yes, three students said no and two were not sure. The comments about why the work was important included, “Because it is special.”, “You get to take your hard work home. It is fun to share at home.”, and “It’s good and I like it.” These comments illustrate that the kindergartners are still working out what it means for something to be important. The things that feel good and they feel proud of are important to them as individuals. Those feelings about their work can make the Literacy Center work important. Another student made a comment that defined important more closely to what I had thought about when asking this question: “When you work harder it makes it more easier.” It felt important to that student because of the growth that he or she

experienced over the course of working hard at the centers. A student that said the centers were not important said, “It is really easy, not so hard, and hard work is very important.” My co-teacher and I asked those two students to share a little more about their ideas. They agreed that some work started out hard and became easier after doing the centers. The student that felt that easy work could not be important then had to think about their reasoning. I asked the class what would happen if their teachers only gave them really hard work at the centers, would they feel successful or frustrated? We discussed that teachers think a lot about the “just right” level of difficulty for all the work students do in Kindergarten, but especially for their independent work. After this portion of the discussion, all of the students agreed that they felt like the centers were helpful to them as readers and writers and that they were important. Students liked to feel the appropriate amount of challenge and have an understanding of how the center activities helped them with their reading and writing goals.

The last question we discussed as a class was about how students felt about working with their classmates at the centers. More students responded that in general they liked to work with a classmate because it was helpful, “when there is a person that is helping you I like it.” Students brought up Independent Reading and Writing Center as centers where they liked having someone else there: “If I don’t know what letter or what word it is, [I talk to a friend]”, “I like working with someone to write my response and in writing center”, and “It is easier to work with a friend because usually I can’t think of sentences.” Several students responded that at certain centers it was very helpful to work with a classmate, but at others it was better to work on their own to help their focus: “I like to work on my own because it helps me concentrate on my writing better,” “I like

doing things by myself, more focused.” Like with the other center characteristics, a balance of social options in the design of centers is also important, as students need opportunities to choose both social and independent learning times.

**Table 10**

*Summary Table of Student Discussion Findings*

Characteristics/Elements Students Reported as Engaging/Positive	Characteristics/Elements Students Reported as Disengaging/Negative
<ul style="list-style-type: none"> <li>● The ability for a student to have choice within a center</li> <li>● Producing work students were able to bring home and share</li> <li>● Variety and differentiation important so students of different skills sets and learning needs can be successful</li> <li>● Option to work with peers or work alone, depending on what each student feels will help them most at any given center</li> </ul>	<ul style="list-style-type: none"> <li>● Too much production in a row was tiring</li> <li>● If activity is perceived as too easy or too difficult, students are more likely to be disengaged</li> </ul>

**Analysis of Center Characteristics**

All of the information learned from the quantitative and qualitative analysis of the seven literacy centers implemented in my classroom was utilized to analyze engaging center characteristics. No one or two centers were significantly more engaging across the multiple forms of data. This finding was initially disappointing to me, as I was unable to answer my research question in the direct manner I originally intended. However, the research and analysis process changed my original thoughts about the specific characteristics I set out to analyze and instead opened my eyes to larger ideas and concepts associated with student engagement at literacy centers.

Of the characteristics originally identified for each center, production, the option of social learning, creativity and mostly sedentary centers were the most frequently repeated positive characteristics of the centers. Technology created more steps and troubleshooting for the students, but they reported liking the use of technology, so thoughtful and limited use of technology can be positive and develop foundational digital literacy skills. Other characteristics that emerged through observation of behavior and student feedback were choice and a balance between ease of task and a feeling of an appropriate challenge. Each of these characteristics is discussed in this section.

**Production.** Production repeatedly came up as a favorite element of the centers from student feedback. Students of all skill levels loved to identify themselves as writers during Read the Room and Writing Center. The scaffolds of word cards and different writing options in the Writing Center made it accessible to all students. The biggest leap for students was moving from writing and drawing single words to attempting sentences and perhaps a simple storyline. Five of the 15 students regularly brought writing, or production, into other centers such as copying the text from Pocket Chart on a piece of paper or writing sentences with high-frequency words on the back page of the printed books for High-Frequency Word Hunt.

Higher level students also enjoyed doing a written response journal for Independent Reading and Listen to a Story. Students with beginning reading and writing skills did not enjoy the response journal as much, had a difficult time remembering to do it as a second step, and did not get as much out of drawing a picture response. For those students especially, doing too many production centers all at once caused them to feel tired or their hand to hurt as they developed their muscles and fine motor skills.

Production was very motivating, but in laying out the center schedule my co-teacher and I must keep in mind how much production is required of the students at the assigned centers in a single day. The total amount of production at the assigned centers must be kept in balance with consumption to stop students from becoming too tired.

**Social.** Behavior observations and student feedback both pointed to social interaction being an important piece of higher student engagement at the Literacy Centers. Ten of the 15 students reported enjoying center activities more when they were able to work with a peer or at least had an option to do so if they felt stuck or needed help. Observed conversations at Writing Center, Pocket Chart and Word Sort were particularly powerful in supporting the literature and research about the positive links between social learning and literacy centers. Social skills and cooperative learning benefit from the practices at literacy centers; further, social interaction positively affects student motivation at the literacy centers and assists in developing foundational literacy skills such as word solving and making meaning from and with text (Slavin, 1987; Hay & Fielding-Barnsley, 2012; Mauerer, 2010).

Social interaction, of course, also can lead to distraction and off-task behaviors at the centers and is not the first choice of engagement for all students. My co-teacher and I must ensure that we continue to help students internalize positive and helpful social interactions at the centers and use social-emotional tools to assist with student self-regulation. Additionally, the social interaction can cause our classroom to be louder than optimal for the guided reading lessons and quieter center activities. This can be especially frustrating for students who prefer to work independently or need a quieter environment to feel focused and successful. Two students in particular commented during the

discussion that working alone in a quieter environment felt better to them. Monitoring appropriate voice levels and helping students to do self-checks of their voice levels at centers is important for all students to be able to be successful during our literacy block whether they are engaging with the social characteristic of their literacy centers or choosing to work independently.

**Technology.** A thoughtful balance is also required as we examine the use of technology at literacy centers. iPads are very exciting for kindergarteners and digital literacy is a component of a well-rounded literacy curriculum (Fountas & Pinnell, 2017a). However, technology troubleshooting and distractions were responsible for a significant portion of off-task time and teacher interruptions (see Table 8). Keeping technology use as simple as possible for students, especially as they learn to manage themselves independently at the Literacy Centers, will allow us to minimize both student and teacher frustration and provide the opportunity to add complexity later in the year should that suit the needs of our students.

Though learning how to troubleshoot can help develop perseverance and autonomy in student learning, too much troubleshooting can lead to frustration and disconnection from the learning. The number of steps involving technology we were asking students to accomplish at Listen to a Story, Word Sort and Pocket Chart were too many for several of our students and took away from the real value of the center. The early removal of the recording portion of the SeeSaw post from Pocket Chart made the post much more manageable for students and we could do the same for Word Sort. Likewise, the number of steps involved in getting set up for Listen to a Story could be

greatly reduced with the use of a reading app that students could browse directly instead of using the QR code reader.

**Sedentary.** Though I often think of kindergarteners as needing lots of movement, both the data from the quantitative analysis and student feedback demonstrated that students were more engaged and felt more successful at centers that had a sedentary component. All of the centers that scored the highest in percent of time on task, student questionnaire feedback and student work samples had a sedentary characteristic except Pocket Chart. At Pocket Chart, students are moving on the floor as they sort through the words and phrases, but not walking around the room as they are during Read the Room. Most students gave the feedback that they found walking around the room very tiring. From the behavior observations, walking around the room presented more potential distractions for students as they came across guided reading groups and students engaged at other centers. When students walked around together at Read the Room, they were more likely to be productive and less likely to be distracted by other goings-on in the room.

Though further research is needed to know for sure, perhaps a sedentary characteristic provides a greater opportunity for a student to become grounded in the center tasks because they know the peer group is also working on the same or similar tasks. The sedentary characteristic may therefore support a positive social interaction to promote engagement. I do not believe this means that students should only sit in one assigned sedentary spot to do all of their centers. The movement from one center to the next is important to help students reset their focus, engage with a new group of peers and

learning contexts, as well as get out some kindergarten wiggles before focusing on the next task.

**Creativity.** The last of the predetermined characteristics that demonstrated value for student engagement in this study was creativity. The ability for students to use their mind in creative ways, make decisions for themselves and make up their own ideas was more enjoyable to students than skill practice. The Writing Center, especially, provided lots of creative opportunity and was brought up numerous times in student feedback and the group discussion. Creativity did sometimes present a challenge for students because they felt coming up with an idea was difficult. When presented with this challenge, most students chose to use some of the scaffolded supports such as the word cards or picture prompts or utilize the social characteristic of the center by talking about ideas with peers.

Teachers must keep skill practice and creativity in balance between centers as a whole. The centers with a skill practice focus, such as Read the Room and High-Frequency Word Hunt, built up student confidence in their independent work, even though they were reported as less enjoyable. The skill practice centers and scaffolding at centers with a creative focus set students up for success in their desire to be independent and creative.

**Choice.** Choice was another important characteristic associated with engaging literacy centers that emerged through observation and student feedback. Students reported especially enjoying the element of choice provided by Listen to a Story, Writing Center, and Pocket Chart. Choice gave students greater ownership of their work at the center and made the tasks more meaningful to them. Though it is interesting that no students brought up the choice of books in Independent Reading and High-Frequency

Word Hunt, helping students see the characteristic of choice at these centers may also help these centers feel more enjoyable and be more engaging for students. Further research into choice and literacy centers is necessary to know for sure.

**Appropriate Challenge and Differentiation.** Students also reported not feeling as engaged at centers that felt “too easy” or “too hard”. The student discussion ended with a very interesting conversation about whether or not literacy centers were important if they felt easy. If a student felt a center was too easy they disengaged from it because it didn’t feel important or worthwhile to them. Likewise, if a student felt a center was too challenging they became frustrated and disengaged from the task. They often then looked for something more enjoyable to do, such as wandering the room or goofing around with a peer.

A balance is needed between students feeling prepared with skills and knowledge of what to do and a little bit of a challenge to help them feel like the work was worthwhile. This observation is supported in the literature, as students have been found to be less motivated if the assigned task is perceived as too challenging or not challenging enough (Worthy et. al, 2015). Teachers must keep the diverse needs of each student in mind when both designing and assigning literacy centers. These needs include both academic skills, social emotional development, and strengths and growth in student approach to learning. When teachers consider these needs, literacy centers become an optimal location to provide high-quality differentiated learning opportunities for all students.

Students also need to have both clear directions and goals for the centers and opportunities to reflect on how the tasks at the centers are helping them grow and learn.

This feedback supports Smith and Simmons' (1978) research stating that students will be more engaged when they perceive the activity is valuable and know how the activity helps them become a better reader or writer.

### **Summary**

A detailed analysis of both the qualitative and quantitative data was provided in this chapter. The qualitative data included calculations of the percent of time actively engaged at each literacy center, student self-reported engagement, and student work samples graded on a rubric. The quantitative analysis highlighted Listen to a Story, Writing Center, High-Frequency Word Hunt, Word Sort and Pocket Chart as centers that appeared in the top three multiple times in the three areas of quantitative analysis. The qualitative analysis utilized observations of student behavior, student verbal feedback, and a group student discussion to provide further insight into the characteristics associated with student engagement to answer the question: What characteristics of literacy centers correlate with engaged, self-directed learning? The center characteristics that were associated with higher student engagement from the analysis of this study were production, social interaction, creativity, sedentary, and more limited technology use. Students also helped illuminate the characteristics of choice, appropriate level of difficulty, and differentiation also associated with higher engagement. The most important takeaways from the discussion of data are:

- Kindergarteners are capable of meaningful, independent literacy work with appropriate differentiation, scaffolding and clear expectations.

- In creating literacy centers, teachers must be clear about the learning goals and outcomes for each center and remove any obstacles to those goals in the center design.
- The different skill sets and personalities of the diverse group of students require centers that offer a balance of characteristics that foster motivation and engagement. Production, social interaction, creativity, and sedentary characteristics were all positively associated with engaging centers, but if all centers were designed with the same amount of these characteristics students would become tired, frustrated and disengaged.
- Opportunities of choice within centers provided students with greater engagement through a sense of ownership of their work.
- Independent work at literacy centers and opportunities for reflection about the work helped students become more confident in their own learning and build greater trust in themselves and their skills.

In the final chapter of this study, I offer my conclusions from the research, implications for future modifications as a result of the findings, a discussion of future research recommendations and a reflection of how the research process impacted me as a teacher.

## **CHAPTER 5**

### **CONCLUSIONS**

#### **Introduction**

This study was designed as an action research project in my own classroom, utilizing both quantitative and qualitative methods of data collection to examine characteristics associated with higher engagement at kindergarten literacy centers. As a result of this study, I was able to gain valuable insight into the successes of the first year of literacy center implementation in my classroom and detailed insights into the guiding question for this research: What characteristics of literacy centers correlate with engaged, self-directed learning? This chapter outlines the major conclusions and learnings from the research about characteristics associated with engaging literacy centers, implications for modifications to our current literacy centers, and implications for how literacy centers are introduced in future years. Also outlined is how the results of this study will be communicated, limitations of this study to consider, recommendations for future research, and the impact the action research process had on me as a teacher.

#### **Characteristics Associated with Engaging Literacy Centers**

From the data analysis, I found the center characteristics that were associated with higher student engagement were production, social interaction, creativity, sedentary, and more limited technology use. Qualitative analysis of student feedback and discussion also

illuminated the characteristics of choice and the appropriate level of difficulty associated with higher engagement.

In completing the data analysis, I also needed to change my original mindset that focused only on the predetermined characteristics. Several other important findings from this research emerged as the most valuable takeaways about literacy centers in my kindergarten classroom. These takeaways are as follows:

- Kindergarteners are capable of meaningful, independent literacy work with appropriate differentiation, scaffolding and clear expectations.
- In creating literacy centers, teachers must be clear about the learning goals and outcomes for each center and remove any obstacles to those goals in the center design.
- The different skill sets and personalities of the diverse group of students require centers that offer a balance of characteristics that foster motivation and engagement. Production, social interaction, creativity, and sedentary characteristics were all positively associated with engaging centers, but if all centers were designed with the same amount of these characteristics students would become tired, frustrated and disengaged.
- Opportunities of choice within centers provided students with greater engagement through a sense of ownership of their work.
- Independent work at literacy centers and opportunities for reflection about the work helped students become more confident in their own learning and build greater trust in themselves and their skills.

The implications and recommendations in the next two sections utilize the takeaways listed above as well as the characteristics found to be associated with engagement to improve the practices around literacy centers in my classroom.

### **Implications for Modifications to Our Literacy Centers**

This study provided valuable information for me and my co-teacher that will help us to make modifications to our current literacy centers. Modifications that we can do immediately include:

- simplifying the use of technology
- supporting positive social interactions
- emphasising the elements of choice available to students and
- providing more time for reflection to make the purposes and learning connections more salient for students.

To simplify the use of technology for our kindergartners we will make the following modifications to Listen to a Story, Word Sort and Pocket Chart. I researched and found an easy to use read-aloud library application called Vooks currently available for a one year free trial to teachers. Installing and using a reading app on the student iPads instead of the QR code scanner process will remove several steps of the set-up process at Listen to a Story. This should reduce the amount of time it takes students to actually get to the portion of the center where they are listening and enjoying a story, exposing them to more complex literature than they can independently read and models of fluent reading. For Word Sort, we will remove the voice recording portion of the SeeSaw post. While my co-teacher and I still appreciate the accountability and the digital literacy learning outcomes of students posting a picture of their work to their digital

portfolio and communicating digitally with their families, we do not want the multiple steps of posting to hinder the overall student engagement at Word Sort. We already made the modification of removing the voice recording at Pocket Chart for the same reason. The disappointing result of this also meant that some students only took the picture and never read the whole poem aloud with their partner. We may remove the technology element entirely from Pocket Chart to emphasize the reading aloud as the celebration at the end of the task instead of the photo. Technology should be used at the centers in a thoughtful and balanced way so that the technology is enhancing student learning rather than creating too many steps or distractions to take away from the learning experiences.

The positive social interactions observed at many of the centers will be supported and fostered at centers previously designed to be more independent. Though it is still important for students to know they have an option to work independently if they feel strongly that it is their most successful mode of engagement with the task, we wish to teach and foster social learning at the centers. We can help students reflect on which centers they work best with a peer and which centers they prefer to work alone and how to manage that balance.

Offering differentiation and balance of characteristics for students is integral to their success at the literacy centers. For example, students may choose to do partner reading during their Independent Reading time. This can help the students that aren't as confident independent readers word solve together with a peer and have positive peer influence of staying on task with a book of their choosing. Likewise with Read the Room, students could work in pairs to find words together, taking turns being the writer. This could especially help the students that felt like finding words starting with certain letters

all around the room was both difficult and tiring. A trial of these modifications will help my co-teacher and I know how best to manage these changes. For example, will students be able to self-select a partner or will partners need to be assigned in some way? Lastly, we wish to support the positive peer interactions at the Writing Center by providing a table that seats more than four students for the Writing Center. The use of clipboards, if more than four students were present at the same time, removed those students from the same social benefits and also made it more difficult to engage with the scaffolding materials. We can easily swap out the round Writing Center table with the rectangular table my co-teacher uses currently for guided reading to provide more table seating for the center.

My teaching partner and I are also interested in looking into more literacy games that could be utilized as centers once they are taught in small groups. These games offer another way to have positive social interactions and a potential additional center. These modifications will help us to make some immediate positive changes to help our current students be more successful and engaged at their Literacy Centers while continuing to learn from their experiences to improve how we teach and utilize Literacy Centers in future years.

### **Implications for Literacy Centers in Future Years**

Though I do see this first year of Literacy Centers in our classroom as an overall success, there are several implications from this study for how we can improve the introduction of Literacy Centers to next year's students. The implications described in this section include:

- slowing the pacing of introduction to Literacy Centers and including more time with teacher support in the beginning
- ensuring the assigned Literacy Centers for each student include the right balance of characteristics and very clear goals for the students
- doing activities that help make the connections to improving skills more salient to students

It is a challenge for teachers to not want to jump into guided reading as soon as possible, but teachers do need to make sure that all students are set up for success at independent learning before they become unavailable once guided reading starts. This challenge is also reflected by the current collection of literature about Literacy Centers, which largely focuses on the need for independent learning to allow teachers to do the important work of guided reading, not how to effectively implement worthwhile Literacy Centers (Ford & Optiz, 2008; Worthy et. al., 2015; Fountas & Pinnell, 2017a). Next year, my co-teacher and I will take an additional one to two weeks as we introduce the centers.

Students also need more opportunities to practice reading the Literacy Center chart so that they know what their goals are for their center time and can better manage their transitions independently. We would also like to provide a longer transition period as we release responsibility to students. This year there were only two weeks where one teacher ran a guided reading group and the other served as floating support for the centers. Next year, we would like to have two weeks be spent with one teacher assisting specifically at individual centers to help set up positive social interactions, make deeper connections, and help students reflect on their learning at each center. We would also like to have the other teacher floating to help troubleshoot or do quick learning interventions

at the other centers. Taking this extra time will help the students have better developed habits and skills for each center when they are fully responsible and independent. Then, we would spend an additional two weeks with one teacher starting guided reading groups and another as float support. When guided reading starts, it will be important that we spend some extra time discussing with students the expectations of centers. This may help reduce the anxious feeling several students felt about accomplishing their literacy centers when they were meeting for guided reading. Assigning only two centers per student and allowing for an optional third, if they finish early, may help students feel less pressure in this transition time. For the third center, the students would not be required to produce a work sample, which could also help reduce the pressure.

The assignment of literacy centers must also be done with the balance of their characteristics in mind. Productivity, creativity, social interaction and choice were all important for student engagement, but too much of any characteristic across all assigned centers became overwhelming for many students. For example, even though production centers were very engaging to students, it felt very tiring for students to have three production centers in a row, especially when their hands did not yet have the muscle tone to write and draw for that long. Two production centers should be paired with a consumption center. For the first half of the year, we will likely remove the response journal from Independent Reading and Listen to a Story to help provide this balance and remove extra steps to help students see the goal of enjoying listening to literature more clearly. Around winter break, we will introduce the response journals in guided reading and practice writing responses in the small group environment several times before it becomes a part of the center work. Likewise, we can help Read the Room feel like a more

manageable task and focus the goal for the students by only assigning one letter for students to find at first or by having students work in partners as described in the previous section (or perhaps we could offer a choice between those two options). For Independent Reading, we will teach the skills of partner reading first through our small group, shared reading and response activities. Doing so could support the students' reading skills with positive social interaction. We could also later provide the option of having a partner or working independently during the centers once the students have the skills for both. For High-Frequency Word Hunt, we may be able to increase the feeling of enjoyment for students by emphasizing the element of choice available to students in the book with which they choose to do a word hunt. We could also add a short production element of writing the high-frequency words they found or a sentence with a few of the high-frequency words on the back page (something some students did of their own volition this year). Lastly, we could also integrate a social element to the center by reading the book, or the words they found, to a partner after they finish the hunt.

A final recommendation for next year from the findings of this study is to do more activities that help students to make connections between the centers and the skills they are developing. Doing so helps increase the value of the centers and students' own growth to become more salient to the students. Though the research of Smith & Simmons (1978), Peterson & Davis (2007) and Kracl (2012) pointed to the same recommendation, my co-teacher and I didn't integrate the practices recommended by their research as fully as we could have due to time constraints in this first year of implementation. My conversations with students when doing the self-reported engagement questionnaire supported the idea that students do not always see the connections between the activity,

their learning, and what they want to be able to do. We have to model and then scaffold that learning. When we introduce the center activities, we should take multiple days to allow for students to first understand what they can do at each center (Kracl, 2012), experience and practice each center. We should also help students take the next step to reflect on what they are learning and set goals for themselves at each center (Smith & Simmons, 1978; Peterson & Davis, 2007). At a regular interval, we should make time in small groups for students to revisit their goals, reflect on their learning, and set new goals.

### **Communicating the Results of this Study**

The results of this study will be communicated in several ways. First, they will be communicated with my co-teacher and Kindergarten teaching team to assist all of us in improving our teaching practices for centers. Second, I will do a brief presentation of the action research process and learnings about student engagement at literacy centers at an upcoming faculty meeting. Lastly, the parents of students participating in this study, others that expressed interest in the findings, and my teaching colleagues at the elementary campus will be provided a link to the published paper once it is available.

### **Limitations of this Study**

Though I executed this study to the best of my ability, several limitations must be considered when examining the data and results. First, this study is limited in the size and scope of the participants. Data was taken from only one classroom of fifteen students at one school. Other student populations in different classrooms and different schools may not follow the same conclusions as this study. Second, data was collected over a relatively short period of time, one month shortly after students were fully introduced to

all of the literacy centers. There were only two observation days per literacy center. It is possible that a longer observation period or an observation period later in the school year may result in different findings. Third, potential researcher bias must also be considered. For this study, I observed centers in my own classroom that my colleagues and I developed. Though I did my best to observe the centers and students objectively, some subjectivity and bias undoubtedly had some influence on the findings and conclusions.

### **Recommendations for Future Research**

This study represents only one small stepping stone in the body of research surrounding literacy centers and their use in elementary classrooms. Currently, the literature about literacy centers focuses primarily on the need for independent literacy work in order for guided reading to be successful in elementary grade classrooms. Researchers continue the conversation by stating that the independent work must be as valuable as the work with the teacher. It must provide meaningful literacy learning experiences with which students can engage. There is minimal research about how students engage with literacy centers and what elements of these centers make them more or less useful and engaging for students at different grade and development levels.

My first recommendation for future research is for other teachers to repeat methods that are the same as or similar to mine in their own classrooms as action research to examine other student populations and contexts with a similar lens. The body of research needs data from many teachers and schools and potentially a meta-analysis of those individual studies. This information would help future teachers see their unique student populations reflected in the literature and inform their own teaching practices. I would also recommend repeating the methods later in the school year to examine how

student growth and practice with the centers impacts the characteristics associated with student engagement. It is likely that centers need to grow with student growth in order to remain engaging.

I would also be interested in looking more closely at the effects of certain practices with student engagement. We were unable to offer students complete choice of which center or centers they participated in. A future study could observe which centers students choose more often than others when given free reign to do so. Additionally, the student feedback pointed out a desire for balance between ease and challenge at the centers in order for it to feel worthwhile. In light of this, I would be interested to know how engagement is affected if students are taught more specifically what skills they are developing at each center and provided with more opportunities to reflect back to see their growth associated with their participation in the centers. A study such as this would further the literature conversation started by Smith & Simmons (1978) and Peterson & Davis (2007) about the links between the perceived value of an activity, goal-setting and student engagement.

Lastly, I would recommend a longitudinal study on student learning of perseverance and autonomy through engagement with center work. Bottini & Grossman (2012), Falk-Ross (2008) and Diller (2016) begin this conversation by showing associations and beliefs that literacy centers empower students to lead their own learning and grow perseverance. The design of a longitudinal study of this nature would be complex, as you would need to have a quantitative measure of perseverance and a very large sample size across many years participating in similar literacy centers to control for other factors affecting perseverance. However, I believe a study of this nature would be a

great addition to the body of research surrounding the use of literacy centers in classrooms in showing concrete value of skills being developed by centers that potentially would not be if students were not given opportunities to learn away from the teacher as well as with the teacher.

### **Action Research Impacts on Me as a Teacher**

The process of conducting action research in my own classroom has been an extremely valuable experience for me as a teacher. Though teachers are constantly observing how activities and lessons went for their students and adjusting lessons as necessary, the more formal observations and analysis caused me to dig into the happenings of my classroom much deeper than I otherwise would.

The development and implementation of the Literacy Centers for our classroom would not have been of the same quality had I not taken the time to do as in depth of a literature review as I did for this study. Schools may have ties or recommendations to certain schools of thought or resources, but it is the responsibility of the teacher to look further and at more perspectives before settling on one approach or practice. If we had only used the resources provided by Fountas & Pinnell (2017a), we may have felt unsure of how to best focus our centers around certain literacy learning goals for our students, or we may have implemented centers based in other subjects such as math or social studies instead of a literacy skill focus. In addition, the centers may not have utilized resources we already had, such as Words Their Way. The ability to look in an in-depth manner, at several avenues of understanding, and then step back to integrate what I learned into a new design, made me a better teacher and a better observer of the students in my classroom.

The opportunity to use video in my classroom to become a “fly on the wall,” taking in student behaviors, was extremely valuable. Though watching the videos multiple times was a lot of work, I would not trade those evenings for anything. The conversations I overheard students having and skills I saw them using to solve literacy, technology, and social problems impressed upon me over and over how capable kindergartners really are. As a teacher, it is important that my perspective continues to be nudged by the reminder of all that is possible rather than succumbing to lowering my expectations when moments or events in the classroom seem too difficult. I also caught myself jumping in to assist too soon or correcting a student for a behavior without first stopping to know the whole context of why something was happening. Though I heard it many times from professors and mentors, this experience solidified how important it is to put up a video camera in my classroom at regular intervals to notice things that I do not in the moment and provide an opportunity for me to reflect on what went well, what could have gone better, and what changes I can make to help things improve.

Lastly, this process has taught me that not only do teachers need to ask questions, but that there are ways for teachers to seek out the answers to those questions directly in their classroom. Though I am not sure I will ever write as extensive of a paper as this about research I do in my classroom, I do see value in doing abbreviated action research projects at least every other year. This process has inspired me to share my experiences with colleagues and encourage them to think of something that is frustrating, that they would like to improve, or something they wonder about in their classroom and to brainstorm ways they could learn more about it. We can encourage each other along the way and share with one another about what we have learned. To me this is a great method

to keep teachers from feeling that they are alone in their classroom behind a closed door and to reduce teacher burnout. When teachers are experiencing a problem in their classroom and are unsure how to solve it, they can feel empowered to seek out support and do research to learn more.

### **Summary**

In this concluding chapter, I reiterated the findings of this study, outlined the implications of the findings, shared ideas for future research possibilities, and discussed the growth I experienced as a teacher as a result of this action research project. When I began my path to becoming a teacher, friends and mentors that were teachers told me again and again that I should learn all I could about helping students with literacy. The courses I took and field experiences with a variety of teachers were very helpful in preparing me, but in my first year of teaching Kindergarten I knew I needed to learn so much more if I was going to provide these early learners with the foundational experiences to set their future learning up for success. The timing of this study was perfectly serendipitous with professional development and encouraged change at my school.

I feel proud of what I was able to accomplish with this study and how the findings will positively affect my classroom and hopefully the classrooms of some of my colleagues. I am now able to examine our current and future Literacy Centers through the lens of characteristics associated with engagement. The results of this study demonstrated that the characteristics of production, social interaction, creativity, choice, salient value for growth and thoughtful use of technology were correlated with higher student engagement. I can utilize that lens to make improvements for student learning in my

classroom. Further, I have the skills to take the action research practices that I developed through the process of this study to other areas of my teaching. I will continue to see myself as a lifelong learner, not only from those that have come before me and written about it, but from my students who give me live feedback every moment of every day.

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**APPENDICES**

**APPENDIX A**

**Previous Six-Day Schedule**

**in Our Kindergarten Classroom**



**APPENDIX B**

**Six-Day Schedule Utilizing Literacy Centers  
in Our Kindergarten Classroom**



**APPENDIX C****Student Self-Reported Engagement Questionnaire**

Name \_\_\_\_\_

1. How much did you enjoy doing this center?



2. How much does doing this center help you become a better reader or writer?



Name \_\_\_\_\_

1. How much did you enjoy doing this center?



2. How much does doing this center help you become a better reader or writer?



Name \_\_\_\_\_

1. How much did you enjoy doing this center?



2. How much does doing this center help you become a better reader or writer?



**APPENDIX D**

**Work Sample Rubric**

Name \_\_\_\_\_ Center \_\_\_\_\_ Date \_\_\_\_\_

	2	1	0
Did the student do the assignment?	Did it completely	Partially did it	Did not do it
Did the student do the assignment accurately (for student's reading level)?	Few to no errors for student's reading level. Student used known skills to complete the assignment.	Some errors for student's reading level. Student mostly used known skills to complete the assignment.	Many errors for student reading level. Student rushing or disengaged, not using known skills to complete the assignment.

Name \_\_\_\_\_ Center \_\_\_\_\_ Date \_\_\_\_\_

	2	1	0
Did the student do the assignment?	Did it completely	Partially did it	Did not do it
Did the student do the assignment accurately (for student's reading level)?	Few to no errors for student's reading level. Student used known skills to complete the assignment.	Some errors for student's reading level. Student mostly used known skills to complete the assignment.	Many errors for student reading level. Student rushing or disengaged, not using known skills to complete the assignment.

**APPENDIX E****Student Group Discussion Questions**

**Student Discussion Questions****Students Present for Discussion** \_\_\_\_\_  
\_\_\_\_\_**Date of Discussion** \_\_\_\_\_

1. What literacy center activity do you enjoy doing the most? Tell me what you like about that center.
2. Is there a center that you have trouble finishing? Tell me about why it can be challenging to finish (too hard, not very interesting, etc)
3. Is the work you do at the literacy centers is important? Why/why not?
4. Tell me about how you work with your classmates at the centers. Does working with your classmates make a center more enjoyable to do?

**APPENDIX F**  
**Observation Sheet**

**Literacy Center Observation Sheet**

Date: \_\_\_\_\_

Center: \_\_\_\_\_

Student	Start Time	End Time	Behaviors

**APPENDIX G**

**Informed Consent Form**

*Hamline University*

Institutional Review Board has approved this consent form.  
 IRB approval #  
 Approved:  
 Expires one year from above approval date.



### *Informed Consent to Participate in Research*

Your child is being asked to participate in a research study. This form provides you with information about the study. The student researcher or faculty researcher (Principal Investigator) will provide you with a copy of this form to keep for your reference, and will also describe this study to you and answer all of your questions.

This form provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research participant.

- If you have any questions about or do not understand something in this form, you should ask the research team for more information.
- You should feel free to discuss your potential participation with anyone you choose, such as family or friends, before you decide to participate.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.
- Your participation is entirely voluntary, and you can refuse to participate or withdraw at any time.

**Title of Research Study:** Exploring Student Engagement in Kindergarten Literacy Centers

**Student Researcher and email address:** [bhelle01@hamline.edu](mailto:bhelle01@hamline.edu)

**Principal Investigator or Faculty Advisor, Hamline affiliation/title, phone number(s), and email address:**

Bryna Wiens, Masters of Teaching Candidate, Principal Investigator  
 [REDACTED] [bhelle01@hamline.edu](mailto:bhelle01@hamline.edu) or [REDACTED]

Bill Lindquist, Faculty Advisor at Hamline University  
 651-523-2584 [wlindquist02@hamline.edu](mailto:wlindquist02@hamline.edu)

Laura Duke, Content Expert Advisor, Literacy Specialist at [REDACTED]  
 [REDACTED]

**1. What is the research topic, the purpose of the research, and the rationale for why this study is being conducted?**

This study is designed to gather information about student engagement at literacy centers in my kindergarten classroom. As a result of this study, my co-teacher and I will be able to keep the literacy centers that are high engagement and provide practice and application for valuable literacy skills and modify or replace literacy centers that are not engaging to kindergarten students in our classroom. The study explores the following research question: What characteristics of literacy centers correlate with engaged, self-directed learning?

**2. What will you be asked to do if you decide to participate in this research study?**

Students, and parent/guardians of students, participating in this study agree to the following. They agree to be recorded with audio and visual while participating at literacy centers in my classroom. These recordings will be observed to document student behaviors at each literacy center, and the time students exhibited engaged behaviors at each center. After I, the researcher, have collected data from these video recordings the video recordings will be deleted. No images, video or audio recordings of the students will be included in the write up of the data, shared publicly, or saved once data has been collected. Participants also agree to participate in a small group discussion led by me about their experiences participating in literacy centers. Responses will be recorded by me, the interviewer, and included as data for the study. Student identities will be kept private.

Work samples from each of the literacy centers will be collected and analyzed on a rubric to assist in identifying overall student engagement at each center. Students will also be asked to provide feedback for each center on a short, two question, survey about how much they enjoyed the center and how much they feel the center helped their reading or writing.

The observations will occur within the normal school day during the regularly scheduled literacy center time. The observations will occur over a three week period at the end of October and beginning of November. Interviews will during a portion of our half-group time in our normal daily schedule. The interviews will take about 10 minutes of each group of students' time.

**3. What will be your time commitment to the study if you participate?**

This study will take place during the regular school day. Over the course of three weeks at the end of October and beginning of November, students will be observed while participating in literacy centers as a part of their regular school day during the 1-hour literacy center and guided reading block from 11:30-12:30 on days 2, 4 and 6. Also during this three week period, students will participate in a group discussion/interview conducted by me, the principal investigator. The discussions will take place during a portion of one half-group meeting time, and will take about ten minutes to complete.

**4. Who is funding this study?**

This study is being conducted without funding.

**5. What are the possible discomforts and risks of participating in this research study?**

By participating in this study, there is minimal chance of risks and discomforts. Students may experience discomfort or worry about being recorded during literacy centers. The video recording will be discussed with students, including the purposes of the recording so as to minimize any feeling of discomfort. The video cameras will be set up prior to the research beginning so students have a chance to become accustomed to their presence and ask questions to reduce any worry or discomfort. Another possible risk is the loss of confidentiality, though every step will be taken to ensure privacy and confidentiality of each student (see number 6 below). In addition, there may be risks that are currently unknown or unforeseeable. Please contact me at [bhelle01@hamline.edu](mailto:bhelle01@hamline.edu) or [REDACTED] or my faculty advisor Bill Lindquist at 651-523-2584 or [windquist02@hamline.edu](mailto:windquist02@hamline.edu) to discuss this if you wish.

**6. How will your privacy and the confidentiality of your data and research records be protected?**

Students' identities will be protected and kept anonymous. False names will be used for any labelling of data. If student quotes are used as a part of research analysis, their names will not be used. The videos captured will be used only for observational purposes and all copies will be destroyed once observations have been made. Videos will be stored on the researcher's password protected computer. Once observations and data are collected from the videos, they will be securely deleted and overwritten. No video of the students will be shared as a part of the research.

**7. How many people will most likely be participating in this study, and how long is the entire study expected to last?**

16 kindergarten students enrolled in my classroom for the 2019-2020 school year. The study will occur over three to four weeks in the fall of 2019.

**8. What are the possible benefits to you and/or to others from your participation in this research study?**

My research is intended to further the research surrounding the use of literacy centers in elementary classrooms during guided reading. Previous analysis of the research has found that literacy centers are not always productive and successful for struggling or beginning readers because the centers are not at an appropriate level, have unclear directions, or are busywork instead of activities that enhance student learning of literacy. The research will improve the practice of literacy centers in my classroom. The data collected will assist me and my co-teacher in planning our literacy instruction for the remainder of the school year and for future school years.

**9. If you choose to participate in this study, will it cost you anything?**

No.

**10. Will you receive any compensation for participating in this study?**

There is no compensation for participating in this study.

**11. What if you decide that you do not want to take part in this study? What other options are available to you if you decide not to participate or to withdraw?**

Your child's participation in this study is entirely voluntary. You are free to refuse to participate in the study, and your refusal will not influence your current or future relationships with Hamline University or with [REDACTED]. In addition, if significant new findings develop during the course of the research that may affect your willingness to continue participation, we will provide that information to you.

**12. How can you withdraw from this research study, and who should you contact if you have any questions or concerns?**

You are free to withdraw your consent and stop participating in this research study at any time without penalty or loss of benefits for which you may be entitled. If you wish to stop your participation in this research study for any reason, you should tell me, or contact me at [bhelle01@hamline.edu](mailto:bhelle01@hamline.edu) or [REDACTED], or Bill Lindquist, 651-523-2584 or [wllindquist02@hamline.edu](mailto:wllindquist02@hamline.edu). You should also call or email me or my faculty advisor for any questions, concerns, suggestions, or complaints about the research and your experience as a participant in the study. In addition, if you have questions about your rights as a research participant, please contact the Institutional Review Board at Hamline University at [IRB@hamline.edu](mailto:IRB@hamline.edu).

**13. Are there any anticipated circumstances under which your participation may be terminated by the researcher(s) without your or your parent/guardian's consent?**

No, participation in this study will only be terminated if the student's parent/guardians wish their child not be included in the study or if the student is no longer enrolled in the classroom for the period of the study.

**14. Will the researchers benefit from your participation in this study?**

The researchers will gain no benefit from your participation in this study beyond the publication and/or presentation of the results obtained from the study, and the invaluable research experience and hands-on learning that the students will gain as a part of their educational experience.

**15. Where will this research be made available once the study is completed?**

This research is public scholarship and the abstract and final complete thesis will be cataloged in Hamline's Bush Library Digital Commons, a searchable

electronic repository. It may also be used in other ways, such as in conference presentations with colleagues or education research journals.

- 16. Has this research study received approval from [REDACTED] where the research will be conducted?**  
[REDACTED] (Head of School), [REDACTED] (Assistant Head of School), [REDACTED] (Assistant Head of School) and [REDACTED] (Lower School Principal) of [REDACTED] have approved this study.

- 17. Will your information be used in any other research studies or projects?**

No, your information collected as part of this research, even if identifiers are removed, will not be used in or distributed for future research studies.

**PARTICIPANT COPY****Signatures:**

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

\_\_\_\_\_  
 Bryna Wiens, Student Researcher/Principal Investigator

Date 9/1/2019

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this Form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree for your child to participate in this study. By signing this form, you are not waiving any of your legal rights.

Printed Name of Participant \_\_\_\_\_ Date \_\_\_\_\_

Signature of Participant: (Guardian) \_\_\_\_\_

Signature of Principal Investigator \_\_\_\_\_ Date \_\_\_\_\_

**Photograph or Video Consent:**

As a part of your child's participation as a volunteer in this scientific research study, he or she may be video recorded during the course of this experiment. Any video recordings taking of your child will be used for the sole purpose of research observations. All recordings will be deleted after research observations have been made. The recordings will never be shown to any parties except the researcher and researcher's advisors. If you have any questions about this consent, you can contact Bryna Wiens at [bhelle01@hamline.edu](mailto:bhelle01@hamline.edu) or [REDACTED], or the Hamline faculty advisor, Bill Lindquist, 651-523-2584 or [wilindquist02@hamline.edu](mailto:wilindquist02@hamline.edu). By signing below, you hereby give permission for any photographs or videotapes made during the course of this research study to be used for the purposes of observational research only.

Signature of Participant (Guardian) \_\_\_\_\_ Date \_\_\_\_\_

Signature of Principal Investigator \_\_\_\_\_ Date \_\_\_\_\_

**APPENDIX H**

**Student Comments About Centers During Questionnaire Feedback**

## Student Comments About Centers During Questionnaire Feedback

Center	Positive Statement	Negative Statement	Other
Independent Reading	“Some books are hard, some books are easy” - Student A 11/25	“I just can’t really read, so it feels like a waste of time” - Student E 11/7	
	“It helps me know how to read and do lips the fish [for sounding out unknown words]” - Student G 11/25	“It’s boring, I’m just looking at pictures” - Student E 11/25	
	“I see a lot of words...and I <i>know</i> them!” - Student H 11/25		
	“I like reading a lot of books.” - Student I 11/25		
	“I’m reading a book, it’s fun” - Student J 11/25		
	“It helps me read” - Student K 11/25		
	“Most of the words I know now!” - Student N 11/25		
	“I like looking at the pictures in my book” - Student O 11/25		
High-Frequency Word Hunt	“When I know [high-frequency] words I am a better writer” - Student L 11/11	“I don’t know, I just don’t like it” - Student J 11/11	
	“It helps me read” - Student K 11/11	“It’s hard because you forget words” - Student D 11/11	
	“It helps me read longer sentences” - Student O 11/11	“I have to find [high-frequency] words and that is hard.” - Student J 11/25	
	“I am better at finding [high-frequency] words” - Student I 11/11	“The book went in a pattern, it is not as much fun.” - Student I 11/25	
	“You can read more” Student B 11/11	“It is hard to remember the words” - Student F 11/25	
	“I get to use my crayons to mark words and practice finding words” - Student O 11/25	“It is too easy for me to read those books” - Student A 11/25	
	“I know words I didn’t know before” - Student K 11/25		

Center	Positive Statement	Negative Statement	Other
High-Frequency Word Hunt (con't)	"I know how to read and spell those words" - Student G 11/25		
	"I don't like it, but it does help me be a better reader" - Student E 11/25		
	"It is fun to color the words" - Student A 11/25		
Writing Center	"When I am sound out words it helps me get better" - Student G 11/11	"There is a lot of people there at once" - Student D 11/11	
	"It helps you with your writing so you can just do it, you don't have to start over again" - Student C 11/11	"All I do is just write words." - Student H 11/11	
	"I like doing the draw and write, but it doesn't help me get better. If I do a story then it's harder so I learn more." - Student A 11/11	"Sometimes I get bored" - Student I 11/11	
	"It helps me start to sound things out" - Student B 11/11		
	"I get to practice writing words" - Student F 11/11		
	"I like writing my own words" - Student O 11/11		
Word Sort	"It is fun to sort, but I easily know how to read, so it doesn't really help me at all" - Student A 11/13	"It's not very fun" - Student E 11/13	
	"It helps my brain think of words" - Student K 11/13	"I don't like it because it is hard" - Student B 11/13	
	"I learn to do new words" - Student J 11/13	"You don't really do any reading or writing, so it doesn't help" - Student A 11/21	
	"I like it because you get to look at pictures and I like giving friends stars. I can read better" - Student I 11/13		
	"It is hard to do, but then I can read it!" - Student H 11/13		

Center	Positive Statement	Negative Statement	Other
Word Sort (con't)	<p data-bbox="444 262 805 348">“I am learning how to read and spell words I don’t know” - Student G 11/13</p> <p data-bbox="444 386 805 499">“It makes you better at reading, gives you more vowels and helps you know words.” - Student C 11/13</p> <p data-bbox="444 537 805 623">“It helps me learn new words and helps me in case I need them for sentences.” - Student O 11/13</p> <p data-bbox="444 661 805 716">“I liked being with [other student]” - Student N</p> <p data-bbox="444 753 805 867">“I have to read words, and it is hard [so I don’t enjoy it], but it helps me learn to read.” - Student M 11/13</p> <p data-bbox="444 905 805 991">“It’s what helps me so I can sound out words” - Student L 11/13</p> <p data-bbox="444 1029 805 1083">“It helps me with my writing” - Student B 11/13</p> <p data-bbox="444 1121 805 1176">“I like reading the words” - Student I 11/2</p> <p data-bbox="444 1213 805 1299">“I read it and then I know. It is also fun looking for the words” - Student H 11/21</p> <p data-bbox="444 1337 805 1423">“It helps me with reading and writing because I know hop goes h-o-p” - Student G 11/21</p> <p data-bbox="444 1461 805 1516">“It helps with spelling” - Student F 11/21</p> <p data-bbox="444 1554 805 1608">“Doing the words now really helps me read!” - Student E 11/21</p> <p data-bbox="444 1646 805 1701">“You learn rules to keep words straight” - Student N 11/21</p> <p data-bbox="444 1738 805 1793">“It is hard, but I get to read more words” - Student M 11/21</p> <p data-bbox="444 1831 805 1871">“It’s a different word sort, I have words now!” - Student J 11/21</p>		

Center	Positive Statement	Negative Statement	Other
Read the Room	<p>“You can read in the room. It helps you learn how to read.” - Student B 11/13</p> <p>“You get to write words, and I like writing words.” - Student M 11/13</p> <p>“It helps me learn words that I don’t know and could use in a story.” - Student O 11/13</p> <p>“I’m sounding out words and it’s easy and it’s helping.” - Student E 11/13</p> <p>“I just write stuff and I like writing. I did all of it and I got through it all before guided reading!” - Student H 11/13</p> <p>“I like writing” - Student I 11/13</p> <p>“Walking around gives me more energy!” - Student J 11/13</p> <p>“I really like writing.” - Student M 11/19</p> <p>“I learn how to read stuff.” - Student K 11/19</p> <p>“Finding the words does help me read. I use my eagle eye!” - Student E 11/19</p> <p>“I’m writing!” - Student A 11/19</p> <p>“I get to learn words and it’s like a treasure find!” - Student O 11/19</p> <p>“It helped me know how to read the small words on the alphabet chart” - Student L 11/19</p> <p>“I can spell out the word and then go ‘oh that says that’” - Student G 11/19</p> <p>“You learn new words and get to write them.” - Student C 11/19</p>	<p>“It’s kind of boring.” - Student L 11/13</p> <p>“It is hard to find W words” - Student I 11/13</p> <p>“It was hard” - Student J 11/19</p> <p>“I don’t like finding words -- it’s hard, not many words to find” - Student E 11/19</p> <p>“It’s boring for my legs because you have to look around a lot” - Student G 11/19</p> <p>“I get to walk around and stretch my legs, but I don’t think it helps me that much” - Student F 11/19</p>	<p>“It’s okay...some of the words I can read and some I can’t. I’m learning to write bigger words” - Student N 11/19</p>

Center	Positive Statement	Negative Statement	Other
Pocket Chart	<p>“I get to have fun guessing where the new words go” - Student O 11/15</p> <p>“I like doing the songs and [using the iPad] taking a picture. Some words I know and some words I don’t know, so it kinda helps me.” - Student N 11/15</p> <p>“It helps me learn. I like it.” - Student L 11/15</p> <p>“It makes me feel good inside.” - Student K 11/15</p> <p>“You learn all the colors of fall.” - Student I 11/15</p> <p>“I liked it because I did it with [other student]. It kind of helps me, I guess, with remembering for writing and some new words for reading.” - Student A 11/15</p>		
Listen to a Story	<p>“You get to watch it!” - Student B 11/19</p> <p>“You get to watch a lot of things and it helps me read” - Student D 11/19</p> <p>“You get to listen to a great story” - Student I 11/19</p> <p>“It helps you concentrate” - Student C 11/19</p> <p>“I like that they say the words and I can try to say the words back” - Student F 11/19</p> <p>“I like getting to listen.” - Student G 11/19</p> <p>“It helps me know more stories” - Student L 11/19</p> <p>“I get to listen and learn words” - Student O 11/19</p>	<p>“It doesn’t help you read” - Student B 11/19</p> <p>“I don’t like it because they don’t show the words” - Student H 11/19</p> <p>“[It’s not very helpful] because you’re just listening to words” - Student G 11/19</p> <p>“[It’s not very helpful] because I can read most of the words on my own” - Student N 11/19</p> <p>“It isn’t really doing reading or writing, you’re just watching.” - Student A 11/19</p> <p>“Watching a screen is not so good for your body, but books are good” - Student D 12/3</p>	

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Center	Positive Statement	Negative Statement	Other
Listen to a Story (con't)	“I can see words on the screen so it helps me sound out” - Student E 12/3  “I like to hear new stories” - Student J 12/3  “It helps me be able to read the [guided reading] books” - Student L 12/3		

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