EXPLORING TEACHERS’ LANGUAGE AND LITERACY SUPPORTS
DURING WRITING IN PREKINDERGARTEN AND KINDERGARTEN
CLASSROOMS

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ABSTRACT

Early writing ability for young children is essential for later literacy and academic achievement. Early writing, especially composing, with young children offers rich opportunities to foster both emergent literacy and language skills simultaneously, which may help boost overall growth for children in poverty. This study examines early writing supports of teachers in prekindergarten and kindergarten classrooms within an early writing framework that includes language, as well as literacy, supports during early writing instruction. Fifteen teachers’ writing instruction was examined during two instructional contexts: morning message and small-group in the fall of the school year. Results suggest that, in general, teachers used morning message to reinforce emergent literacy skills related to the alphabetic principle and concepts of print. Teachers’ language (i.e., translation) supports during writing were sparse. However, during small group writing activities, teachers’ supported child language related to pragmatics/discourse at higher rates, specifically, guiding children’s attention to topic. Additionally, a unique relation emerged between teachers embedding language supports within writing instruction to their overall global classroom quality. Results suggest that composing with young children may be an optimal context to support child language growth. Few teacher background or control factors were systematically linked to quality writing in the classroom; however, teachers who spoke using more complex syntax also used more abstract writing supports (i.e., explaining and connection), suggesting linguistic features may be connected to teacher approach during instruction. Implications for professional development are discussed.
This dissertation is dedicated to my Dad who taught me the importance of thinking, and my mom who taught me the importance of dreaming.
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CHAPTER 1
INTRODUCTION

In the field of early childhood, much more attention has been devoted to reading than writing. Yet, writing is equally important. Although recent national statistics show that by 4th grade, only about 40% of children read on a proficient level (NAEP, 2017), only 26% of children in 4th grade can write at a proficient level (NAEP, 2002), suggesting that for many children writing can be a challenging task that teachers need to support.

In a simple way, writing can be defined as a complex process whereby a message is generated for a purpose. Because the purpose involves communicating some idea, it must be shown in a tangible way. During development, young children become more sophisticated in their a/ idea generation as they become exposed to more concepts, stories, and conversations, and b/ they become better able to approximate standard language and writing conventions in their tangible representations. Thus, the nature of children’s writing changes over time.

At the earliest stages, children make marks on paper that may represent ideas. Despite its unconventionality, young children’s scribbling is practice matching their representation to their best approximation of conventional writing. For example, early scribbling evolves into smaller units of scribbles, separated by blank space. Longer words with more syllables get a longer scribble than shorter words (Tolchinsky, 2006).

Beginning around preschool and early kindergarten, children’s writing then transitions into attempted formations of letters. Children begin to become more aware of letters and begin to construct a repertoire of letter knowledge. As children attempt to write words, they begin to invent spellings as they explore sound-letter correspondences.
It would be typical in prekindergarten and early kindergarten to see child writing which had a word(s) that contain only initial and ending sounds (i.e., “bat” spelled with just a “b” or “bt”). Additionally, children at this stage better match sizes of letters in words and spaces between words to conventional print, especially as fine motor skill develops.

Although early writings of young children in prekindergarten and kindergarten do not yet represent formal writing in the sense of extended text (e.g., sentences to paragraphs), and children’s written expression ability is generally confined to letters and words, this does not mean writing instruction needs be isolated to only letter or word writing. When young children are asked by a teacher (or parent) to write for the purpose of expressing a message to some audience, we call that composing. Composing tasks, thus, are those that involve generating an idea and then communicating that idea through writing. I use this term throughout the dissertation in order to make clear that composing is different from some other commonplace early writing tasks offered to young children, including copying letters or writing their names. When composing, children create a meaningful message of at least a few words and share that through markings in some way according to their developmental level (e.g., random letters, actual letters, letters that correspond to actual sounds, etc.).

As an example, consider a task in which a teacher invites children in preschool or kindergarten to compose a summary of the butterfly life cycle (from egg to caterpillar to chrysalis to butterfly). Typically, in this composing task, the teacher will guide and engage children through a writing process, ultimately constructing sentences with simple punctuation, capital letters in the beginning of a sentence, and a period at the end of a sentence; however, children are unable to conventionally write the message yet without
teacher collaboration. To begin, the teacher may ask the child to draw a picture representing the first stage of the cycle, and the teacher and child may together come up with a sentence(s) describing this stage. The child may write one or more word(s) of that sentence as her representation of the idea, but the teacher then writes the whole sentence, using conventional text, underneath the child’s writing attempts. In this way, early composing is an instructional context in which the teacher can model children’s more conventional writing stages with increased accuracy in spelling, sophistication of their grammar and syntax, and length of the content they produce. In short, early writing, especially composing contexts, in early childhood classrooms involve a constellation of skills, as children communicate with others about something meaningful to them.

Although early reading is a heavily researched area, far less empirical work has examined early writing. The neglect of writing within early literacy research is problematic for the following reasons. First, the ability to share and analyze knowledge, ideas, and experiences through writing is a necessary skill of school; therefore, writing ability is an integral part of school achievement (Graham, Gilespie, & McKeown, 2013). Second, many children who have difficulty with writing in the early years never regain their footing, in part because expectations for the complexity of children’s writing increase over time. As the grades progress, educators’ request increasingly sophisticated texts, and, and these writing demands permeate all academic subjects as children progress in their schooling (Dickinson, McCabe, & Essex, 2006). Finally, writing interlinks many language, literacy, and broader cognitive skills (Berninger & Swanson, 1994) in a different way than reading (James, Jao, Berninger, 2017; Juel, 1988), making it an important context for development.
Early writing ability directly relates to children’s later literacy and academic success (Dinehart & Manfra, 2013) in part because it supports three strands of skills. First, early writing for young children entails practice navigating back and forth between complex processes, such as translating an idea to written words, and then attending to letter-sound correspondences of each word, etc. As a result, the frequent attention switching involved in writing may help increase skills related to self-regulation needed for general academic learning and later writing (Dinehart & Manfra, 2013; Graham et.al., 2013).

Second, early writing may also jumpstart neural processes related to literacy development because of research that shows different levels of brain activation when young children write (Berninger, Swanson, & Griffin, 2014). In fact, children seem to process early literacy skills differently when writing (Ehri, 2000; Berninger et al., 2014). For example, when children write letters, the letter/reading processing network of the brain is engaged more so than when children see or hear letter names (James et al., 2017). What this means is that writing may be recruiting key areas of the brain that will help with early literacy development more broadly.

Last, the generative nature of writing involves high levels of metalinguistic skills, so that children who write more may build more advanced metalinguistic knowledge, which in turns supports both writing and reading ability (Byrnes & Wasik, 2019; Puranik, Al Otaiba, Sidler, & Greulich, 2014). For example, while writing, children are challenged to communicate to an absent audience, a process which takes considerable marshalling of language skills. To construct written text, children must use more concise and complex language structures as a result (Bourdin & Fayol, 2004; Roth, 2000). Early writing, then,
is an important opportunity to engage children in complex cognitive-linguistic processes which may be an important catalyst for later academic achievement. Taken together, early writing – particularly regarding composing – may be a challenging context that teachers could use to build foundational processes that relate both to literacy development and later academic achievement.

Unfortunately, early writing has not been underscored as an important context in early childhood classrooms, either in research or practice. Although some research in early writing has unpacked early literacy skills involved in children’s name and letter writings (Bloodgood, 1998; Diamond & Gerde, 2012), we know far less about composing, or generating and expressing a message in written form, even though this could be a very powerful instructional context for language and literacy learning. The purpose of this study is to explore this gap and build new knowledge about composing activities in preschool and kindergarten classrooms.

Observational research consistently shows that teachers spend very little time on early writing during instruction, particularly around composing (Gerde, Bingham, Pendergast, 2015; Puranik et al., 2014). But when composing does happen, research has not carefully probed the ways that teachers support children’s writing during composing, including what they say and do to help children. It may be the case that some, or many, teachers may need to do more to support composing in the earliest grades, including preschool and kindergarten (Graham, McKeown, Kiuhara, Harris, & Graesser, 2012). For example, imagine that a teacher invites children to write a summary of the butterfly life cycle, as above. If the teacher is unaware that children need to learn about how writing differs across genres, her support may be limited. For example, the teacher may not be
able to say, “When we write a summary, we need to give the order of what happened.” or “To show everyone that this is what happens in the life cycle at the beginning, what word should I start off with?”

Of all of the things that teachers can do during composing (Bingham, Quinn, Gerde, 2017; Juel, 1988), supporting children’s language skills may be especially important. Language skills, in particularly, relate to children’s ability to generate, organize and translate ideas into written text. Building these early foundations, such as children’s vocabulary and syntax knowledge or children’s awareness of language’s purpose to communicate to a particular audience directly affect children’s translation process (i.e., idea to text generation), and this particular process seems to be so vital to beginning writers in that it sets the stage for children to be able to communicate through writing (Fayol, 2017). Therefore, this research intends to incorporate language into an early writing framework to investigate how teachers support early writing in early childhood classrooms during key instructional periods.

In order to understand teachers’ instructional moves during composing, this project develops an observational coding scheme to capture what teachers say and do during composing in preschool and kindergarten. This project targets preschool and kindergarten teachers because children’s early writing development begins before conventional writing. As such, foundational literacy and language skills within the context of communicating a message is vitally important for children to engage in and understand processes of writing. Teachers were observed in two contexts: small group and morning message. Morning message is one activity in early childhood classroom where teachers use writing to communicate a message while targeting early foundational
skills. As such, morning message may provide additional insight into how teachers support early writing development.

The small group context was chosen because teachers intentionally focused on writing, which means they chose writing as their small group activity. Therefore, the intent of the teacher to provide writing instruction can further illuminate what teachers focus on and how when they do target writing. Small group is also associated with differentiation because the teacher has also targeted children who need teacher support to complete tasks at a certain level. The nature of small groups is to differentiate instruction. With fewer children, the teacher can spend more time with individual children working to scaffold activities at a slightly more intense level than children would be able to do on their own.

To establish the coding scheme, I first drew on theory (the Simple and Not So Simple Views) to establish categories of codes, and then used an emergent approach to add codes as needed to categorize the array of ways that teachers interacted with children. In the results, I offer descriptive statistics to understand what teachers emphasize during their early writing instruction, and I explore what teacher and classroom context variables are uniquely linked to teachers’ instructional moves. Ultimately, this study sheds new light on the nature of teachers’ support for children’s writing during composing, highlighting areas where professional development could strengthen teachers’ practices and offering questions for future research.
CHAPTER 2

LITERATURE REVIEW

Why Writing is Important

Simply put, writing involves making marks of some kind on paper, and thinking about what those marks represent. As children get older, the complexity of their marks and the degree to which they approximate standard language and text conventions, as well as the complexity of the ideas they are expressing, both grow. A small, but increasing, body of research has begun to highlight the relationship between early writing ability, starting in preschool, and later literacy development and overall academic achievement (Aram & Levine, 2004; Craig, 2006; Dinehart & Manfra, 2013; Jones & Ruetzel, 2015; Shatil, Share, & Levin, 2000). The National Early Literacy Panel [NELP] (2008), in a meta-analysis of 190 studies, found that when children in preschool and kindergarten displayed higher levels of writing ability, these same children achieved greater academic competency than children who displayed lower levels of writing ability in preschool and kindergarten. Furthermore, the predictive (albeit not necessarily causal) power of early writing ability to academic competency remained even after considering children’s socio-economic status (SES), Intelligence Quotient (IQ), and any overlapping skills, such as alphabetic knowledge or oral language skills.

More recent research also has confirmed that early writing ability seems to have long term links to, or perhaps even effects on, academic achievement for both low-SES students (Craig, 2006; Dinehart & Manfra, 2013; Manfra et al., 2017) and Dual Language Learners (Matera, 2011). For example, Manfra et al. (2017), using standardized and classroom performance math and reading tests of third grade students in high needs
schools as outcomes, found that from a battery of emergent literacy skills, only two measures were consistent and strong predictors of third grade achievement for at risk students. One was early writing ability and the other was pre-mathematics skill. Taken together, the research suggests that early writing ability is unique (Berninger et al., 2006).

The benefits of early writing for later achievement stem from the fact that there is something special in children seeing their written marks (Tolchinsky, 2006). As such, writing is a compelling context in which to build more discrete language and literacy skills. Early writing may be a special context in two important ways related to literacy and language development.

Why Writing Is a Special Context for Learning about Language

The ability to leave a marking invites our experience and analysis of the marking, which can be a way to motivate attention. Indeed, children as young as 18 months seem to take greater interest in writing when the tools (such as pencils and markers) provided left tangible marks. Tolchinsky (2006) offered a group of preschool children materials, such as paper, writing tools, tools that did not write, and observed that children played longer and strived to write with the tools that left marks of their writing. Children who chose tools that did not leave marks quickly abandoned the tools and did not try to use them on the paper provided, but children who chose tools that did leave markings explore their writing attempts.

This interest seems to follow from an emotional appeal in writing, because children see a product of their inward thinking. Much like a piece of artwork, children become attached to a written product because it was created by them and, therefore, holds a very personal connection. The tangible writing piece belongs to them, which may
motivate children to maintain attention especially in their early attempts to explore and use early literacy skills. So, writing may be a motivational context, which may, in turn, provide additional cognitive benefits and may, in turn, help children attend to harder cognitive tasks such as matching speech to print.

Second, because writing can have special power to hold children’s attention, writing can help children take note of symbols and potentially their links to sounds; it can help draw attention to the relations between markings and speech sounds and, eventually, reinforce sound-symbol correspondence. Ehri (1987) noticed in her research with children that the visual aspect involved in writing seemed to “press” children’s awareness of language, which transferred into greater gains in literacy outcomes. She suggested that, when children have visual supports of their language, the links between spoken and written language cement in their memory and then are more readily retrievable. During early writing attempts, the connections between sounds and symbols can become very apparent because children are encouraged to slow down and translate spoken words into writing, analyzing print. For children, as a result, writing can enhance internal representations of symbol to sound correspondences (Dinehart & Manfra, 2013). With development, children’s focus while writing extends from individual speech sounds and markings to whole words and, ultimately, to complete paragraphs (Berninger et al., 2002).

In this same way, Ehri (1987) further concluded that print exerts an active, formative influence on speech. While writing, children must translate ideas into written text, marshaling and analyzing their linguistic repertoire. In other words, Ehri (2000) suggested that proficient speech does not necessarily come first, followed by reading and
writing. When children write with guidance and must construct more and more complex sentences and use more sophisticated vocabulary, they can be exposed to more complex language structures building their syntactical and vocabulary knowledge, which can help when engaging in conversations. Put differently, language knowledge bases help children to engage in and benefit from challenging conversations in school (Berninger, Abbot, Cook, & Nagy, 2017), and writing with children may help build those language knowledge bases.

Therefore, for young children, writing entails more than visual analysis of sound-letter correspondences but also invites children to delve into language and consider how to represent it with markings.

Language Development in Early Writing

The previous section explored how writing broadly helps children reflect on and analyze spoken language in a new way, but it is important to note that research has sorted out the specific language skills that are critical for, and potentially enhanced by writing. Writing incorporates different language skills, including vocabulary, phonological awareness, syntax, and broader understandings of language purposes, termed pragmatics. Children need to use these language skills, independently and in concert, in order to communicate information through writing in ways that other people can understand. For instance, in informational texts, we expect definitions of terms. In stories, we expect a beginning, middle, and end. As above, writing is a multifaceted process involving thinking about what one wants to communicate and then actually producing that communication under conventional constraints. Although teachers may emphasize the latter facet of this equation, because the text produced is generally easier to evaluate than
the underlying ideas, arguably, for young children, the emphasis in their own minds may often be on the former, because children can think about what they want to write far earlier than they can actually write it in standard ways.

Empirical evidence supports the essential role of language in writing for children, especially for idea generation and then consequently translating ideas to text using language forms. For example, Hooper, Roberts, Nelson, Zeisel, and Fannin (2010) assessed core language abilities (e.g., vocabulary, syntax, and morphology), phonological processing, and prereading skills of sixty-five African American children at the end of their prekindergarten year. Core language abilities significantly predicted later narrative writing ability in grades 3-5 and predicted the rate of writing growth, accounting for prereading and phonological processing skills. Other research has also shown that early language ability shares a relationship with later writing ability (Berninger et al., 2017; Fayol, 2017, Kent, Wanzek, Petscher, Al Otaiba, Kim, 2014; Kim, Al Otaiba, & Wanzek, 2015), suggesting that, even in very early writing contexts, language development is an important component. Next, I explore how early writing provides an opportunity for child language development.

**Composing: A Special Kind of Writing for Language Development**

Although there are certainly many ways in which writing is linked to language, composing, in particular, with young children in early childhood classrooms can be a powerful context for both recruiting and reinforcing language skills. As above, I use the term “composing” to refer to the facet of writing related to inventing or thinking up a message to communicate to some audience and representing that idea in any developmental form (e.g., scribbles, one-word invented spelling, etc.).
Composing, more than any other kind of writing (e.g., practicing handwriting, practicing letter formation), has the potential to recruit and support language skills. First, as discussed earlier, the personal aspect involved in composing (i.e., the product belongs to or is created by the child) heightens the child’s awareness of how to be understood through following social conventions. For instance, it has been observed that some children attend highly to spelling when someone else is unable to decipher their invented spellings; other children revel in creating interesting stories for their peers and focus more energy in revising a plot detail after feedback (Dyson, 2013). What this means is that providing young children support and feedback during composing can help children attend to their language and ways we use language to communicate because when children write they are trying to be understood.

More so, as children strive to match their speech to print during writing with teachers and peers, children must use and revise their language to match purpose, thereby increasing their skill with abstract, decontextualized discourse (Ninio & Snow, 1996). Decontextualized discourse is an important kind of language interaction that children increasingly experience as they enter early schooling. It often involves tailoring language so that it makes sense to someone who does not have access to the speaker’s own immediate experience. When children enter early schooling they encounter contexts beyond their immediate experience, like learning about a butterfly life cycle or listening to an imagined story. Young children also must relay what they know for others to understand and share real and imagined narratives. In this way, children must come to anticipate what others may not know and, as a consequence, rely more strongly on
language to fill in the gaps for the people outside of their immediate experiences and knowing.

To exemplify how young children’s attention to language can be enhanced during composing, consider a child writing about what she likes to do with her grandparents; this piece might be composed during journal time and supported by a teacher in small group. First, the ideas for the writing piece come from the child’s own personal experiences. This personal knowledge motivates and allows the child to focus cognitive effort on high-level language interactions in which the teacher and child attend to language use to create meaning that can be understood for an audience through a back-forth questioning, termed feedback loops. The child can provide details to the teacher who helps the child develop her topic, simultaneously developing her syntax and vocabulary because these feedback loops with an experienced language user can demand children to revise language in order to converse and be understood (Ninio & Snow, 1996).

Some recent evidence in support of the benefits of early composing, in particular, has been shown with preschool (Bingham et al., 2017), kindergarten (Senechal et al., 2012), and early elementary (Berninger et al., 2002) children. For example, Senechal and colleagues (2012) compared the effects of three intervention groups (e.g., composing, phonemic awareness training, and book reading). Kindergarten children in the composing group performed better, not only in spelling, but also on phonemic awareness and learn to read tasks than did children in the other groups, suggesting that composing as a context may be providing children with additional cognitive benefits that help boost overall literacy and language development. Others have also noted that early composing seems to provide meaningful learning opportunities to foster language abilities in young children.
(Hall, 2017; Wheatley, Gerde, Cabell, 2016). Therefore, composing with young children can be an optimal context to heighten children’s language and literacy skills.

Because early writing is a central force in a child’s school achievement, teachers need to know how to support it. However, we do not know how to provide “good” writing instruction or to provide the type of high-quality writing instruction necessary to set lasting foundations that prepare children for the continued complexity of school writing. This gap in the research is particularly concerning when we consider that many disadvantaged children need high-quality writing instruction if they are to make sizable gains to close achievement gaps (Craig, 2006; Dinehart & Manfra, 2013). Before one can explore the quality of writing instruction, however, it is essential to understand the elements of writing itself. The Simple View of Writing (Juel, Griffith, Gough, 1986) that was expanded upon in the Not So Simple View of Writing (Berninger & Winn, 2006) provide the clearest delineation of those elements.

What is Writing: Theoretical Perspective

Writing is a complex process precisely because it is the simultaneous orchestration of distinct thinking processes. This means that a variety of skill sets are working in a dynamic interchange by the writer for different goals and purposes during the writing process (Flower & Hayes, 1981; James, Jao, & Berninger, 2017). The Simple Views of Writing, in particular, makes visible those sets of skills involved in the early writing of young children., and underscores the importance of composing to intertwine skill sets for later writing.
Juel and colleagues (1986; 1988), following low-income children through first to fourth grades, found that writing ability was composed of two basic constructs: spelling and ideation. In many ways, this model parallels the simple view of reading (Gough & Tunmer, 1986), dichotomizing the process into code- vs. meaning-related skills. Specifically, the Simple View of Writing asserts that, in the same way that decoding ability dominates early in reading development, so spelling ability dominates early in writing development. But, as children advance in their writing experiences, the construct of ideation, parallel to meaning-making in reading, emerges as the higher level process contributing to later writing ability. What this means for instructional purposes is that teachers need to target a constellation of language and literacy skills to set foundations for children to progress as writers, and that at certain time points in development, one construct may be more central than the other and require more explicit practice. Below, I explain each of these two aspects of writing as laid out by the Simple View.

**Spelling**

Spelling refers to the accurate mapping of speech sounds to letters (e.g. cipher knowledge) during writing. To do this, children must discriminate sounds within words, drawing on an oral language skill termed phonemic awareness. Simply put, phonemic awareness is the ability to recognize and manipulate the sounds in words. The Simple View also articulates that, in order to be able to spell, children must also have letter knowledge, a literacy skill. In English, an orthographically deep language, spelling is quite complex and unpredictable, and children require considerable practice to master basic patterns as well as to memorize irregular constructions.
Spelling is typically considered to be a code-based skill and, thus, to fall into the category of literacy skills. However, it is important to note that oral language is implicated in spelling because of the importance of phonemic awareness. When children hear language, they must discriminate between sounds, breaking words down into sound units. The more language they are exposed to, the better children can process language at the sub-word level (Berninger et al., 2017), increasing their phonemic awareness. This fact highlights the many ways in which foundational language (sound) and literacy (letter, print) skills are interdependent and, if targeted concomitantly, could help bring greater gains in multiple areas for children (Lonigan & Phillips, 2017; Storch & Whitehurst, 2002); put another way, as discussed above, targeting a wide array of early writing-related skills ultimately supports later reading from multiple directions. For example, Juel (1998) and others have found that early cipher knowledge (i.e., ability to match letter/s to sound/s to crack the code to read) predicts both later decoding and later spelling ability (Ehri, 2000). In other words, writing may be a context to further develop a child’s decoding and word-reading skills.

**Ideation**

Ideation refers to creating the concepts or ideas upon which writing will focus. Ideation in the Simple View is a complex process in its own right, and Juel and colleagues (1986; 1988) identified two primary components: generation and organization of ideas. Juel and colleagues found that when children write they engage in a separate process than when reading. They speculated that generating and organizing ideas relied in part on children’s experiences with language, specifically school language that has certain linguistic features children use as they meet school writing demands. Thus, while
reading and writing may both draw from language resources, the creativity involved in writing (specifically, composing) involves much more significant language contribution. To compose, children have to first generate a novel idea, speculated from Juel (1988) to have come from unique language experiences of the child. Yet, while composing, children must also creatively choose the language to communicate from among alternatives as they generate text. And they must organize these ideas in a way that will be cogent for the reader. Thus, Juel’s concept of ideation revealed how writing is heavily grounded in language skills.

In sum, the Simple View established (a) distinct but interdependent skill sets involved in writing and (b) developmental changes in how these skill sets operate. All of this sets up a valuable theoretical lens through which to view instructional quality of writing, but it leaves some issues untouched. For example, the Simple View does not specify the specific skills that children need to use to get from an idea to a written text, nor does the Simple View account for the physical processes (e.g., making letters) involved in writing. However, Berninger and colleagues’ more elaborated Not So Simple View better accounts for skill sets involved in ideation and also accounts for the physical and procedural aspects involved in creating script or text, both of which help to pinpoint the components of writing that teachers need to focus on during instruction.

*The Not So Simple View*

Acknowledging that writing is a multidimensional and complex process (Hayes & Flower, 1980), Berninger and Winn’s (2006) Not So Simple View unpacks the processes and skills children use as they translate ideas to text. Berninger and colleagues (1994; 2002; 2006) conceptualized one main component as transcription (i.e., handwriting and
spelling), and a second main component as translation, which is idea generation at
different levels of language (i.e., vocabulary, syntax, pragmatics/discourse) to text
generation at the word/sentence and text/genre levels). In this way, the Not So Simple
view is similar to the Simple View (with Spelling and Ideation) and to other models in
the field (Flowers and Hayes, 1981) but also somewhat more detailed in that it separated
certain early literacy and language skills specifically related to child transcription and
translating. Berninger and colleagues saw children navigating between transcription and
translation skills to generate text. As such, this theory proposed that writing placed
significant demand on children’s working memory and executive functioning
(particularly task-switching) and, consequently, could require substantial time, as well as
extensive guidance from experts (e.g., teachers), especially for beginning writers.

Transcription

According to the Not So Simple View, transcription relates to the handwriting and
spelling ability children draw upon to write. These two components are thought, by the
theory’s developers, to be lower level skills within the overarching act of writing. Yet for
very young children (e.g., preschoolers and kindergarteners), spelling and handwriting
encompass early foundational literacy skills that many children have not mastered,
making them actually quite challenging. Berninger’s theory acknowledged that, earlier in
development, transcription skills take up significant cognitive load; however, it also
asserted that, later in development, children have automatized transcription skills,
allowing more focus on translating skills. Therefore, central to understanding
transcription in the frame of the Not So Simple View is the importance of automatizing
handwriting and spelling early in development.
Handwriting. The construct of handwriting involves early foundational skills not accounted for in Juel’s Simple View model, which looked at first and second grade writing. Current research into emergent literacy recognizes that children’s writing attempts begin as toddlers, and early writing attempts are a synthesis of children’s literacy experiences as they experiment using fine and visual motor skills, including concepts of print and knowledge of letters.

Concepts of print is an early literacy skill children use when handwriting. It involves children’s knowledge that written words carry meaning, and that written words follow certain rules such as (a) words are written from left to right, and (b) words have spaces between them. Words match the speech heard; therefore, children over time come to realize that written print carries meaning and adheres to certain formal rules. Knowledge of letters builds through meaningful home and school experiences with print, as children’s attention becomes drawn to shapes and names of letters. When children move beyond scribbles, letter knowledge and formation are used along with concepts of print while handwriting. Children must know letter shapes but also develop the fine motor capacity to coordinate hand-eye movements to replicate letter symbols, gradually writing words and leaving spaces while moving from left to right. Research has underscored how integral early handwriting is for young children (Berninger et al., 2010; Ehri, 2000; Puranik & Al Otaiba, 2012) in that in intertwines concepts of print, letter formation, and letter knowledge.

Spelling. While Juel’s model, which included spelling, set the stage for understanding the indirect effects of language on literacy, Berninger’s model connects spelling and handwriting and thereby underscores the unique cognitive nature of spelling.
which connects sight and sound for children. Spelling (as above) is a child’s ability to match sounds to symbols. It should also be noted that children through exposure and practice begin to visualize the whole word committed to memory. For example, certain sight words like “the” and “he” begin to be memorized, and children spell the word because of their broader visual sense of the word rather than breaking words down to sound and symbol correspondences. Spelling requires skills related to handwriting, but also requires the further development of the alphabetic principle along with building up children’s sight word recognition.

Alphabetic Principle. The alphabetic principle encompasses two parts. First, alphabetic understanding is the recognition that words are made up of letters that represent sounds. The second aspect of the alphabetic principle is recognizing the systematic relationships between letters and their corresponding sounds. Once a child is able to match a sound to its letter(s) or letter pattern(s), he is then able to retrieve that information for purposes of decoding words or encoding those words while spelling. The mental construction of the conventional spelling system is orthography. So, Berninger’s model accentuates the sound to symbol conventions involved in spelling, underscoring spelling as one of the most critically vital and lasting components of writing ability (Graham, Berninger, Abbott, Abbott, & Whitaker, 1997; Graham & Santangelo, 2014).

The significance to instruction for the Not So Simple View is that children need specific supports in building their understandings of the alphabetic principle, including exposure to letter names and shapes, as well as letter-sound correspondence. Moreover, the Not So Simple View holds that once spelling and handwriting become more
automatic, children’s focus can shift toward the higher level processes of translation to generate longer texts, described next.

Translation: Idea to Text Generation

In the Not So Simple View, translation involves taking ideas and putting them into words, sentences, and elaborated text. As such, for young children at early stages of writing development the three components to translation: Words, Sentences, and Texts/Discourse, which refer to conventional written forms of ideas, the early language components of vocabulary, syntax, and pragmatics/discourse are essential to young children. For purposes of this study, as a result, I refer to early language components of idea generation (i.e., vocabulary, syntax, and pragmatics/discourse) that children draw from during early writing rather than the more conventional forms (i.e., words, sentences, text), which are the terms used in Berninger’s model.

Semantics/Vocabulary--Words. Vocabulary is not just knowing a bunch of words. Rather, working under the Not So Simple frame, vocabulary is an index for conceptual knowledge. Use of a particular word excludes other words and thereby elucidates the similarities and differences between that word and similar words. Therefore, children’s vocabularies are the conceptual bases from which they draw from when writing. While writing, the lack of specific vocabulary to match with intended idea or purpose can hinder children’s abilities to communicate their ideas as they become stuck on the word. Thus, a lack of vocabulary can stifle children’s later writing fluency, affecting overall writing quality.

Syntax--Sentences. Children must also be able to organize vocabulary words into sentences according to the syntactic rules of school language. Syntax refers to the way we
organize words to express an idea. Many children who do not fully understand standard syntax stumble through their writing, losing focus of the idea as they become lost in the translation process (Berninger et al., 2002). Complex sentences, in particular, are a marker of “school language” in that these sentences are needed to show certain relationships to establish contexts for a distanced audience (Berninger, Nagy, & Beers, 2011; Fayol, 2017; Halliday, 1997). Berninger and colleagues (2011) stress the need for children to be made aware of standard and “school language” syntax to improve writing quality.

_Pragmatics/Discourse—Text/Genre._ This section of the model refers broadly to the fact that, in order to write, children need knowledge of genre and knowledge of audience. Simply put, pragmatics refers to the (often implicit) rules about what kinds of language are used in what kinds of settings. Ultimately, the pragmatics of language help children understand meanings of that language use within a particular setting. For example, a child who comes from a home where directives are made explicitly and spoken as a command such as, “Put the crayons away” may misinterpret a teacher who asks, “Can you put the crayons away, please?” to mean that the choice of putting crayons away remains with the child because he was given a question that he should be allowed to answer. However, children who are accustomed to directives phrased as questions would understand that the command was hidden as a question. These children would understand that the teacher expected that they would put the crayons away, and they would respond appropriately to the expectation of putting the crayons away. In relation to the context of early composing, children need to understand the pragmatics of school language because this is the language used for school writing tasks.
School language is undergirded with its own set of expectations. It is often more abstract than conversational language (Halliday, 1994; Schleppegrell, 2004), requiring certain linguistic features to communicate stories or information to a distanced audience. For instance, children often encounter storybooks where narrative contexts of an imagined plot, characterization, and certain imagery and action sequences require more precise word choice and complex syntax structures. When children write their own stories, they are expected to relay stories according to school language expectations. Because school language is more formal and considers a distanced audience, school language has been associated with language features such as, decontextualized language (i.e. developing topics and ideas beyond a present context so that language must consider what the audience may not understand), complex syntax, and richer vocabulary (Barnes, Dickinson, & Grifenhagen, 2017; Juel, 1988). Therefore, school language awareness at the word, sentence, and text/discourse level, according to the Simple Views will contribute to child writing ability (Juel, 1988; Kim, Park, & Park, 2015).

Component Skill Approach vs. Writing Process Approach

Common to studies of elementary writing, the writing process more broadly has been a focal point. As a complex process involving generation and organization of ideas, translation, revising, and editing (Hayes & Flower, 1980) many studies have explored writing with a process focus, for example, observing strategy use or exploring protocol use during writing tasks (Graham, Harris, & Chambers, 2017; van den Bergh, Rijlaarsdam, van Steendam, 2017). In contrast, a components skill approach, as this research undertakes, looks more specifically at the skill sets used during these processes. In regards to early childhood writing, breaking down component skills necessary to
transcription (i.e., spelling and handwriting) have been studied (Bingham et al., 2017; Graham, Kiuhara, McKeown, & Harris, 2012; Puranik et al., 2014), but component skills related to early child translation during composing have not. Therefore, a component skill approach may help understandings on how to support children during the writing process. For instance, in order for children to brainstorm, they must retrieve conceptual knowledge bases to generate ideas and then translate those ideas using language. To better help teachers identify child ability and, thus, scaffold children during writing, a focus on early skills could help teachers with a more targeted approach to helping children translate during composing, which means helping children more specifically with their language because language skills, in particularly, undergird writing processes (Puranik & Lonigan, 2014). For instance, like brainstorming, during revising children are also re-generating ideas and translating to text. At early stages of writing and for beginning writers, grappling with translation seems to be prominent because of its cognitive-linguistic switching and, thus, heavy reliance on child language skill sets (Fayol, 2017). For this reason, a component skill approach can help broaden our understanding of how teachers are supporting child skills, especially language skills which is the intent of this research, during early composing tasks.

To conclude, the Simple and Not So Simple Views underscore a dichotomous view of writing as including a) intertwining skills related to the production of letters and sentences among young children, as well as b) the creative thinking and language competency involved in deciding what to write about. Without ample practice coordinating skills to meet an intended purpose or reach set goals during composing, underdeveloped skills will constrain children’s writing development. Therefore, working
under the Simple View’s foundation, this research embraces composing as a meaningful context in early childhood classrooms for young children to develop these multiple writing-related skill sets.

**Putting It All Together: What’s Most Important about Writing?**

Implied within the Simple and Not So Simple View theories is the idea that composing may be a potentially rich context for building both language and literacy because component skills in both of these areas are activated as children write. Moreover, young children find composing very interesting and can be often motivated and attentive to language forms to communicate in writing activities. Therefore, early writing is a highly useful context for teaching children – and letting children independently explore – language and literacy.

The Simple and Not So Simple Views also imply that connecting language and literacy happens most when teachers use composing contexts, as opposed to isolated handwriting or spelling skills. Composing can help children understand purposes of early and later literacy skills, thereby increasing children’s attention to and use of language resources during literacy processes, resulting in an overall cumulative effect. For example, a child could not spontaneously spell “dog” while writing independently without knowledge of dogs or a communicative intent to share information about dogs. The child’s interest to write “dog” comes from a feeling resulting from an environmental interaction with dog. The boy likes dogs or is interested in them or has read about one in a book or has one at home. Attempted expression to write at whatever the child’s developmental level generally comes from some kind of interest. For example, the teacher may ask children to write about their favorite pet. The topic of dog comes from
some interaction with “dog” that carries a certain feeling for the child who then is motivated to write about dog. This interest during composing may help when the child strives to spell dog, thus giving meaning and purpose to skill practice.

The above example shows the power of composing for young children in that early writing is a communicative context that allows children to engage with language and literacy skills in meaningful ways. The problem-solving aspect of composing, whereby early literacy skills are drawn upon in order to express ideas, can heighten children’s motivation to work within their zone of proximal development (Kaderavek, Cabell, & Justice, 2009). Evidence shows that while composing, language and literacy skills depend upon and reinforce each other, resulting in coordination for meaning, which may help children make deeper connections between language to literacy and have greater gains as a result (Storch & Whitehurst, 2002; Whitehurst & Lonigan, 1998). In fact, Lonigan and Philips (2016) suggest that in order for children, especially children at risk, to make meaningful gains, attending to both language and literacy in targeted and specific contexts is essential. To

As noted, composing for young children needs guidance and support by adults to help children learn to communicate. Against this backdrop of what writing entails, the following three sections will explain the importance of teacher processes during instruction, specifically teacher support, and why teacher processes are important especially for at-risk children. We then detail what we know about teacher processes during writing instruction in early childhood classrooms.

Quality Instruction: Focus on Process
Converging evidence suggests that teachers’ implementation of high quality language and literacy instruction across settings seems to be one of the primary factors influencing children’s academic gains, in writing as well as in other areas (Goble & Pianta, 2017; Guo, Kaderavek, Piasta, Justice, & McGinty, 2011; NICHD, 2002; Jacoby & Lesaux, 2017).

Defining Quality

Justice and colleagues (2008) generally define instructional quality as “dynamic features of the classroom” (p. 52), underscoring interactions between teachers and young children. Justice et al. (2008) distinguish between the specific kinds of interactions that support literacy and those that are linked to language. For language instruction, they emphasize responsivity, particular regarding the way a teacher responds to and engages in conversations with children. Responsivity is typified by open-ended questions, turn-taking, and expansions and recasts of children’s utterances. High-quality literacy instruction, on the other hand, is the explicit and systematic teaching of code-related features of written text, involving phonological and print structures to help children “crack the code,” or understand the alphabetic principle (Justice et al., 2008). Because writing entails both code and language-based skills, composing seems like a promising context to help teachers provide both quality language and literacy instruction; thus, it is important to focus on teacher processes during writing.

In addition to teachers’ practices (sometimes called process quality), classroom quality also includes materials and physical supports (called structural quality). Where writing is concerned, these include available environmental print, an established writing center, and writing materials (Marusschen-Brown et al., 2017). While these classroom
features are important, they are only truly powerful for children’s learning when teachers use them well (Jacoby & Lesaux, 2017; Justice et al., 2008).

Differentiation

The process of teachers’ instruction broadly must consider account the wide range of abilities and skills of children to meet their needs. Children learn from an experienced other who provides assistance to children to bridge from their current understandings into more complex ones (Vygotsky, 1978). Teachers, as a result, must be aware of children’s current competence, as well as what supports and scaffolds they could use to bring each child further along in their understanding. Providing supports and scaffolds at children’s levels means that a teacher must also differentiate instruction. Generally, the term differentiation is used to describe tailoring the process of instruction to meet diverse needs. Therefore, the writing skills teachers target and how they support them are important ingredients in helping children incorporate the complex skills involved in early writing. In particular, teachers’ supports of early writing instruction can provide children with meaningful opportunities to bolster language and literacy growth, which is especially important for children coming from low-income homes.

Quality Writing Instruction’s Importance for Disadvantaged Children

Many children living in poverty lack background in the type of language and literacy practices that are typically employed in schools. Disadvantaged children especially must grapple with the types of instruction that may be different from the experiences of their homes, where language and literacy interactions may differ from school literacy and language forms (Heath, 1986). Confronted with this difference, many of these children find themselves already “behind,” or without particular kinds of
language and literacy skills, before even the first bell of their schooling rings. In turn, this misalignment between home and school literacy frequently results in achievement gaps between children in poverty and their more affluent peers (Hart & Risley, 1995; Storch & Whitehurst, 2002). We know many children in poverty struggle on standardized measures of essential early precursor skills. On average, children in poverty are behind their more affluent peers in concepts of print, phonemic awareness, and letter knowledge (Diamond, Gerde, Powell, 2008). Many low-SES children also enter school with less exposure to words, which is linked to less vocabulary development (Hart & Risley, 1995; Hoff, 2003; Huttenlocher, Haight, Bryk, Seltzer, Lyons, 1998), and they enter with less exposure to syntactical structures, which is linked to less syntax development (Hoff & Naigles, 2002; Huttenlocher, Vasilyeva, Cymerman, & Levine, 2002; Justice et al., 2013).

These language gaps, starting at infancy (Fernald & Hutado, 2006), have a complex lasting effect on early literacy, including writing development. Language deficits seem to relate to literacy ones for low SES children (Whitehurst & Lonigan, 1998; Storch & Whitehurst, 2002). For example, research suggests that children with greater language ability are better poised to attain the alphabetic principle (Juel, Griffith, & Gough, 1986). Likewise, children with developed literacy skills are more apt to comprehend and participate in rich conversational turns surrounding literacy practices (Cabell et al., 2011; Kaderavek & Cabell, 2009). It is not surprising that disparities in both language, specifically school language, and literacy emerge simultaneously, given that children’s language and literacy skills are intertwined (Storch & Whitehurst, 2002; Kaderavek & Cabell, 2009). Children in poverty may need multiple, interrelated skills to
be targeted and reinforced in concert in order to make greater gains (Lonigan & Phillips, 2016).

Perhaps because of the need to focus concurrently on developing all these integrated skills, which can be a challenge, children in poverty tend to remain behind. Developing literacy trajectories tend to remain rather fixed. For instance, Juel (1988) has demonstrated that poor first grade writers remain poor writers three years later when tested at the end of fourth grade. Further, problems for poor children starting out at a disadvantage do not end with a persistent but static gap; instead, there is some evidence to suggest that disadvantaged children precipitously fall further behind more advantaged peers as their schooling progresses from kindergarten through eighth grade (Bradbury & Corak, 2015).

Unfortunately, high-poverty early childhood classrooms typically have low-quality language and literacy instruction (Justice et al., 2008). First, most low-SES children are exposed to low-quality language interactions with teachers. In these interactions, at-risk children are less likely to be engaged in multi-turn conversations (Cabell et al., 2015), less likely to hear linguistically complex input (Dickinson, Darrow, & Tinubu, 2008; Justice, 2008), and less likely to be encouraged to initiate and lead discussions (Dickinson et al., 2008). Additionally, children in under-resourced communities are less likely to have interactions during literacy instruction that work to scaffold children’s understanding of language and its connection to print (Gerde et al., 2015).

As noted above, we know much less about how teachers support writing, and what the general quality of writing instruction is in preschool and kindergarten classrooms. Teachers must face an onslaught of challenges on a daily basis, which is why
a “process” focus during writing instruction, in particular, is important to further investigate. We need to see how teachers use writing and what types of supports they use as they facilitate child writing development because writing, in particular, seems a promising context for low SES children to practice with language, and especially school language (Dinehart & Manfra, 2013). To begin to conceptualize what quality writing may look like, we first examine what is already known about teaching early writing in classrooms. In this way, we lead to conceptualizing quality writing, specifically teachers’ support of early writing components.

What We Know About Teaching Writing in Early Childhood Classrooms

Writing instruction involves attention both to quality of language and literacy instruction. Children need teacher facilitation in building language and literacy skills related to writing development. Although there is a dearth of knowledge concerning teaching writing in the early childhood classrooms, some recent research exploring emergent writing instruction has found some common threads.

First, observational research suggests many teachers still lack knowledge of best practices for early writing instruction beyond just having a writing center and allowing writing time (Puranik, Al Otaiba, Sidler, & Greulich, 2013). In fact, although most teachers allocate some writing time in their classrooms and have writing areas stocked with materials to facilitate writing, most teachers are not involved in the writing activities and most centers do not provide props to facilitate child writing (Gerde et al., 2015). For instance, exploring kindergarten writing amount and type in 21 classrooms, Puranik et al. (2013) found that the most frequently observed type of writing was children writing independently: children-initiated writing without teacher support. In fact, teachers
interacting with children about their writing or involving children in composing tasks was scarce.

Bingham et al. (2017) found similar results. Bingham and colleagues observed forty-one preschool and Pre-K teachers in three US states and their students (N = 488). Teachers were observed in their classrooms and instances of writing instructional practices – termed support by Bingham and colleagues, a term which I will use throughout this paper – were recorded, qualitatively coded, and analyzed using the WRITE (Gerde & Bingham, 2012), a measure focused on the quality of writing instruction in classrooms. The WRITE is an observational tool designed to assess writing practices in early childhood classrooms. The WRITE consists of 41 items that make up five sections thought to be critical for quality writing instruction: Writing Environment, Environmental Print, Teacher Models Writing, Teacher Scaffolds Children’s Writing, and Independent Child Writing.

Results from research by Gerde et al. (2015) and later Bingham et al. (2017) revealed that most teachers did not provide authentic composing tasks within their literacy classroom. For example, writing tasks within early childhood classrooms were confined to isolated letter or name writing. Overwhelmingly, most teachers focused exclusively on handwriting supports as a result, excluding, for the most part, consideration to spelling or composing supports in writing. However, what was interesting was that teachers who used more composing supports were more likely to have children with better handwriting and spelling skills by the end of the year, supporting the Not So Simple View’s position that these skill sets are highly integrated (Berninger et al., 2002).
Second, in part because composing tasks are rare, when teachers do interact with children around composing, the specific behaviors they used to support and encourage children were typically limited in number and in nature (O’Leary, 2017). Gerde and colleagues (2015) observed 68 preschool classrooms and concluded that teachers lacked what the authors termed “intentionality” in their instruction. For example, they explained that while half of the participating teachers modeled writing, the modeling was of an implicit nature; teachers, they observed, did not draw children’s attention to the writing process (e.g., “We need to leave spaces between our words as we write our sentence.”) or clearly explain what they were writing (e.g., “We are writing about grandparents.”). They argue that the majority of observed implicit instruction seen in the modeling and scaffolding is problematic for children at risk who need explicit instruction in literacy with multiple, meaningful activities to practice and engage with specific skills.

Another concern reported from Gerde’s et al. (2015) research was that, even though 80 % of teachers used some form of writing support within their classrooms, most were basic, generic approaches. As an example, teachers commonly were observed reminding children to write their names on papers or sign in at a play area; teachers’ supports were usually of the same kind for every child. Taken together, the observational research seems to suggest that when teachers do support writing, and particularly composing, they lack intentionality in that they a) do not target multiple intertwining component skills within meaningful contexts, and b) do not vary in the level of support they provide to children.

Implications for Current Project: What Should Teachers Do?
As we consider the nature of high-quality writing instruction (i.e., supports) related to composing in early classrooms, it is helpful to examine what teacher practices would represent evidence of these practices. Based on the Simple and Not So Simple View of writing, there are 5 areas that composing-related instruction might target: Concepts of Print, Alphabetic Principle, Semantics and Vocabulary, Syntax Knowledge, and Pragmatics/Discourse. Given the focus of the current paper on the role of language in early writing, it is notable that the first two kinds of activities – Concepts of Print and the Alphabetic Principle – are primarily concerned with the code of print or transcription for writing, whereas the last three –Vocabulary, Syntax, and Pragmatics – are more directly linked to language or translation for early writing. Possible examples of high-quality instruction in these areas will inform the coding scheme with which the current study examines classroom practices.

**Concepts of Print**

Teachers supporting Concepts of Print may ask children to “read” what they wrote, even if children’s marks are only scribbles to an adult’s eye. As the child is reading, the teacher traces her finger from left to right as the child is speaking, encouraging the child to do the same. Additionally, the teacher may model and explain writing from left to right, leaving spacing, and using key punctuation that cues readers.

**Alphabetic Principle**

For the Alphabetic Principle, a teacher drawing a child’s attention to /m/ words, making the /m/ sound, and connecting it to the first letter of the child’s name (Marie) may also encourage the child to try to write a story about a monster, laying out letters or words for children to use in their writing that target and reinforce /m/ sounds. In this way, the
teacher is setting up opportunities. Further along in development, a teacher may set up opportunities so that children write with and explore certain vowel blends during a composing task. The essential ingredient across these practices, however, is that the degree of support provided by the teacher should match the child’s skill level and should support the child in making meaning through writing.

*Vocabulary*

Teaching that reinforces these skills through composing might involve using a writing task to summarize, categorize, or extend what children have read. Teachers might also repeat, or ask children to repeat, or explain target vocabulary words, or to use new words to describe familiar ideas. Teachers might also ask children open-ended questions about new words or assist children in making inferences using new words.

*Syntax*

Practices tapping this category generally include encouraging child responses about their writing and extending or recasting child talk to model and increase syntactic complexity. As another example, cue cards displaying certain prepositions can aid children to tap into and produce more complex sentences such as, “The frog with the red kite is on the lily pad next to the rock.”

*Pragmatics*

Lastly, supporting children’s language pragmatics helps in discourse/genre awareness, a teacher may provide a prop perhaps related to targeted vocabulary. The teacher shows the children a stuffed animal, and children imagine where this animal might live (e.g., develop setting). The teacher and students write down certain details of the setting and then share in a back and forth, so children can revise and elaborate (i.e.
focus on syntax, vocabulary), considering audience. Later, the teacher can use their setting descriptions to generate possible problems their character within a particular setting might encounter for their story (i.e. getting children to see that character and setting can lead to a conflict in a story).

Implications for the Current Project: How Can We Quantify Teachers’ Practices?

As above, the Simple and Not So Simple Views of writing emphasize the importance of situating children’s writing activities within a meaning-making, communicative context and weaving code-focused skills around this attention-holding, motivating activity. Further, prior research identifies several ways to meaningfully quantify what teachers are doing to determine the degree to which it is of high-quality.

**Total Amount of Supports Provided**

Total amount of supports, summing across all of the 5 categories above, may relate to child writing growth (Bingham et al., 2017), in that it may reveal teachers’ amount of engagement with children to support literacy and language skills during composing. In general, more supports would indicate that teachers were offering children more guidance around writing, and more supports would likely predict greater child learning.

**Proportion of Language-Based Supports**

The proportion of teachers’ supports that target language skills—related to translation particularly -- vocabulary, syntax, pragmatics/discourse -- will reveal the extent to which teachers were focusing children on the act of composing. This proportion should be constructed in the following way: total number of supports aimed at language
Different Types of Supports

The previous section outlined the types of teacher supports that are likely to foster children’s writing competence. Calculating the number of different types of support teachers use sheds light on how well teachers integrate a variety of skills together during writing instruction. Targeting and reinforcing multiple, interrelated language and literacy skills in concert is especially beneficial for growth in at-risk populations (Lonigan & Phillips, 2016). Further, if teachers are differentiating instruction around children’s diverse skill levels and interests, we expect to see a variety of strategies and skills employed to support the complexity involved in composing texts with young children.

Supports Involving Abstraction

A plethora of research exists substantiating the importance of parents’ (Robert & Barnes, 1992) and teachers’ (Gerde et al., 2015; Maurulis & Neuman, 2013; Rowe, 2013) conceptually challenging supports during interactions for children’s later language and literacy gains. Conceptually challenging supports are ones that ask children to “distance” themselves from an immediate context (Pentimonti & Justice, 2010), requiring more abstract thinking. For example, if a teacher asks children to apply a vocabulary word to a unique situation (e.g., “If it is Autumn outside, what kinds of clothes would you have on?”), children will have to use the word in their own novel way, which may require deeper processing of the word. Similarly, when a child is prompted to connect the sound of a letter to past experiences with that sound (e.g., “What other word from our family unit starts with the “s” sound), purposes of the sound to communicate words to ideas may
become more relevant (Storch & Whitehurst, 2002). Further, the deep processing of these skills can transfer to other instructional contexts when children are given ample exposure to abstract ways of thinking.

Because children, however, vary in their writing ability, less abstract, more concrete supports may be beneficial to children with lower skills at first. For example, Hindman, Connor, Jewkes, & Morrison (2008) and Hindman & Wasik (2012) found that children with lower vocabulary skills benefitted more from highly concrete talk about new words (e.g., showing children pictures, describing the pictures) while higher vocabulary peers benefitted from abstract talk (e.g., predictions).

Therefore, teachers use of abstract supports may help to reveal two things about teachers’ processes as it relates to quality writing. The first is we would expect that teachers who were using more abstract supports were varying instruction based on children’s individual differences. For example, teachers who included supports beyond identification and modeling would be offering opportunities for children to stretch their understandings if they were able to move beyond identification. Teachers who, more so, only used identification and modeling may not be differentiating their instruction to meet children’s needs because there are great variances among children’s ability levels. Second abstract supports may indicate the teacher approach in the sense that teachers’ use of abstract supports may relate to teachers’ belief that children are capable of engaging in challenging conversations if scaffolded appropriately. An example of challenging students may be the teacher saying, “What else would you see on the playground?” The child, at first, doesn’t respond. The no response means that the child is having difficulty either conceptualizing playground or naming concepts related to playground, or both. So
the teacher modifies, “When you go outside for recess, you’re on the playground, so what do you see?” The teacher gives the child a reminder of playground by connecting it to the child’s everyday experience to help the child clarify playground. However, the challenge of the question remains. The teacher follows with, “You don’t see a TV, right? So what do you see?” In the last exchange the teacher has helped the child identify what would not be on a playground to further narrow the child’s attention to playground and associated concepts. So while the teacher has narrowed and identified, she is still requiring the child to make connections so that the child can add details when writing. In this way, calculating teachers’ total abstract supports may capture the extent they were differentiating and challenging children.

In sum, we conceptualize high-quality writing instruction during composing tasks as the total number of supports, the variety of supports, and the proportion of supports that target language skills.

Useful Covariates

Prior research also highlights several useful covariates for examination of the quality of writing, including considerations to linguistic environments of early childhood classrooms, such as global classroom quality and teachers’ linguistic features: syntactic complexity.

Global classroom quality. Global classroom quality looks at an overall systems-level as an index for overall quality. As a systems-level measurement, Classroom Assessment Scoring System (CLASS) (Pianta, La Paro, & Hamre, 2008), in particularly, has appropriated into its framework that teacher-child linguistic interactions are a key proximal process through which children’s language skills are developed in early
childhood settings (Justice, Jiang, & Strasser, 2018). Thus, the observational measurement is to gauge overall quality of teacher-child interactions and, therefore, does not look at more nuanced aspects of the linguistic environment, such as teachers’ linguistic features used within those interactions (Justice, Jiang, & Strasser, 2019). To measure classroom quality, the current study will use the CLASS instructional support domain designed, specifically, to capture the overall quality of teacher-child interactions.

**Syntactic complexity.** Complex sentence use (e.g. subordinating clauses attached to main clauses) is associated with an academic language register children need to master especially in later reading and writing; therefore, young children need meaningful experiences with more complex syntactic structures (Halliday, 1994; Levine et al., 2018, Snow & Uccelli, 2009). Teachers vary in their use of complex syntax, which in turn predicts children’s language outcomes (Cabell, Justice, McGinty, DeCoster, & Forston, 2015; Farrow, Wasik, & Hindman, in press). Teachers with high expectations for all children may be more inclined to speak using more challenging syntax, and setting high expectations is associated with academic success (Delpit, 1998; Rowe, 2013; Uccelli, Demir-Lira, Rowe, Levine, Goldin-Meadow, 2018). Thus, teachers’ syntax may represent a more micro-level measure of teachers’ instructional quality and, as such, may help explain variation in teachers’ writing support use. To measure syntactic complexity, the current study will use teachers’ clausal density.

**Teacher education.** Finally, teacher education may also influence teachers’ support of writing. Teachers’ conceptual knowledge of early childhood language and literacy skills will influence how they target and scaffold those skills. Markussen-Brown and colleagues (2017) in their meta-analysis reported that educator conceptual knowledge
was not affected by professional development, suggesting teachers may need more time to build such knowledge to affect their teaching practices. More time may be furthering education through higher degree programs. Thus, teachers with higher degrees in early childhood education may be able to respond to and support early childhood writing relative to those teachers with less education.

Unanswered Questions

From the limited body of observational research, it seems that teachers may not be using intentional writing contexts within prekindergarten and kindergarten classrooms. Puranik and Lonigan (2014) found that, in the fall and winter of kindergarten school year, teachers were on average spending less than one minute per day in writing instruction with young children. Later research found that, when teachers offered writing instruction, instead of composing, they provided rote, isolated skill practice such as forming individual letters or writing one’s own name (Bingham et al., 2017; Gerde et al., 2015), without regard for the meaning-making aspects of writing. Reflecting on the Simple View, then, children had very few opportunities for the important tasks of translation.

Beyond the infrequency of writing instruction in early childhood, it is still unclear what teachers do and say when they do offer writing instruction. As above, early writing encompasses the integration of multiple literacy and language dimensions (Berninger et al., 2002). Yet research on early writing in classrooms has largely been confined to examining how teachers target spelling and handwriting, with hardly any systematic investigation of language-related components of writing (e.g., translation) (Fayol, 2017; Kim et al., 2011; Tolchinski, 2016). In particular, very little research has examined composing activities, which – because of their emphasis on using writing to share
meaning – may offer more insight into how teachers use writing to support language outcomes such as sound awareness, vocabulary, and grammar. The aim of this paper is to examine observations of the early childhood (PreK and K) classroom to explore teachers’ writing instruction, especially writing with the aim of composing to incorporate how teachers’ support language skills related to translation.

This research attempts to add to the body of observational research in two distinct ways. First, this research will intentionally target PreK and K teachers instructionally planned writing settings of morning message and small group, both of which have the potential to target composing, in order to collect careful observations of teachers’ practices during composing-related activities in these settings.

Morning message is a setting that could potentially target teachers’ writing instruction, particularly composing. Teachers generally compose a message alongside children that usually connects to concepts being learned within the classroom.

During small group instruction, teachers have the opportunity to target literacy and language concepts for children at their own level because the teacher usually is focused on the needs of 5-6 children in the group and, thereby, can provide more individualized instruction.

Second, this work will carefully code teachers’ writing instruction around Concepts of Print, Alphabetic Principle, Semantics and Conceptual Knowledge, Syntax Complexity, and Discourse/ Genre Awareness. Ultimately, this exploration of how prekindergarten and kindergarten teachers support writing, and especially composing, will illuminate which child skills teachers focus on when composing and precisely how they target these skills. Eventually, work of this nature can better illuminate where early
childhood teachers need more training to increase the quality of their writing instruction to children, and particularly those coming from low SES homes. Teachers in low-SES districts, receiving the training they need, may be able to reap the possible benefits of early writing, as research indicates, and may help, ultimately, close achievement gaps.

Research Questions

Q1. What is the nature of preschool teachers’ morning message? Specifically, what supports for literacy and language skills (e.g., Concepts of Print, Alphabetic Principle, Semantics/Vocabulary, Syntax, and Pragmatics/Discourse) from the Simple View and Not So Simple View do teachers use, and with what degree of abstraction?

Q2. What is the nature of preschool teachers’ small group instruction? Specifically, what supports for literacy and language skills do teachers use, and with what degree of abstraction?

Q3. How is the quality of writing instruction in morning message and small group/individualized writing related to global classroom instruction quality, as measured by the CLASS?

Q4. What factors—including global quality (CLASS) score, teacher level of complex syntax during interactions, teacher education, and average classroom vocabulary score in fall---predict the quality of teachers’ writing instruction?
CHAPTER 3

METHODOLOGY

Participants

*Teachers.* Prekindergarten and kindergarten teachers (N=33) from two urban districts in the mid-Atlantic region were recruited to participate in a larger study of professional development for which early writing was not a focus (See procedures). Fifteen teachers were chosen as the subsample because, of the 33 teachers, 15 teachers included writing instruction within their small-group setting (which would not have necessarily involve writing, since teachers could choose to focus their small-group instruction on any topic). We combined both control and intervention teachers, but most intervention teachers did not focus on writing in small groups. Specifically, only three intervention teachers out of the fifteen, one from prekindergarten and two from kindergarten were included. All but one of the teachers (N=15) were native speakers of English, 47% were of ethnic minority backgrounds, and 53% were White. All held a bachelor’s degree, but the majority (67%) had master's degrees. Most were women, but there was one male teacher in the sample.

*Children.* Children in the study were from high-need public elementary schools, where at least 55% received free or reduced-price lunch. The total number of children participants was 488, with 45% in Pre-K and 55% in K. The children were 4.8 years old at the beginning of the year (i.e., fall of the academic year). Most (85%) of the children were African American, and 15% were Latino. Twenty percent of children were Dual Language Learners, and 75% of these children spoke Spanish at home. Gender was equally divided (See Appendix F for descriptives of key variables).
Procedures

Broader Research

This study was part of a broader research project to train teachers to increase the quality of their interactions with children during language and literacy instruction. Schools agreeing to participate were paired by poverty level (percentage free/reduced lunch) and percentage of Dual Language Learners (DLLs), and then one member of each pair was randomly assigned to the intervention group while the other was assigned to the control group. There were no differences across conditions in teacher ethnicity or education, or in child age, ethnicity, or gender.

Explaining Conditions. Half of the teachers were randomly assigned to receive the online PD intervention from Oct-May, with group workshops and individualized coaching around implementing research-based instructional strategies, including defining words, asking questions, and encouraging child talk about vocabulary in book reading, center activities, and morning message. Teachers completed nine online modules (about 1 per month) focused primarily on increasing children’s use of language and vocabulary. After each module, teachers videotaped themselves implementing the target strategies in their classroom. Their coach then reviewed their video and provided individualized feedback to improve their practice.

The other half of the teachers were randomly assigned to the business-as-usual control condition and did not receive intervention training or coaching. Control classrooms implemented their district’s language and literacy curriculum, which was district-developed and included book reading, morning message, and small-group instruction. They attended their district’s PD.
Combining Conditions

In the current study, we combine the conditions for three reasons. First, the intervention was unlikely to play a role in teachers’ writing instruction because the PD intervention did not focus on writing, either explicitly or implicitly. Second, teachers in the intervention underwent minimal training because videos were taken from the fall only, before the intervention began. Lastly, teachers who focused on writing instruction during small group were mostly control teachers. Therefore, for the purpose of the present study, we included all 33 classrooms irrespective of study condition.

Data of Focus

All teachers were observed in their classrooms in fall and videotaped for a full morning of instruction. All teachers (N=33) videotaped morning message instruction. In addition, a subsample of 15 teachers -- prekindergarten (n =8) and kindergarten teachers (n =7) -- used a writing activity during small group instruction. Data were coded directly from video. Although teachers also had spring videos of morning message, small group, and book reading instruction, we chose only to focus on fall videos because (a) even fewer teachers focused on writing in small groups again in the spring, which would have minimized our sample size, and (b) intervention teachers would have experienced additional training over the year, which presented a potential confound.

Measures

Classroom Video Coding Scheme

Creating the Coding Scheme.

Initial coding methods yielded an exhaustive list of teacher behaviors during writing instruction. Observational notes by the first researcher included contextualization
of the behaviors. Coding actions of the participants using constant comparative methods (Glaser & Strauss, 1967), resulted in “focused coding,” moving towards categorizing data (Charmaz, 2006) with the original categorized literacy and language constituents of early writing development (e.g. concepts of print, alphabetic principle, semantics, syntax, and pragmatics/discourse) in order to capture the many ways teachers may support these components (See Appendix A).

From the written list of observed behaviors, we categorized the specific skill and how it was being supported. For example, “We use capital letters to show the beginning of a sentence,” we determined was related to Concepts of Print, specifically print conventions as opposed to directionality. Additionally, we determined that the teacher was explaining the function of print for children. In contrast, “Who can come up and circle the capital letter,” we determined the teacher was eliciting child identification of print conventions. Codes emerged through this reciprocal fashion and disagreements were discussed until agreement on categorized or substantive codes. Conceptualizing the substantive codes, we went back to the data in a second round, coding skill support with developed emerged component categories in mind. Lastly, we differentiated between teachers’ high and low supports as explained below (See Appendices B-F for a list of emerged codes).

Definition of “Writing Supports”. For both morning message and small group writing activity, every writing support was coded. A support can be defined as any attempt to engage and sustain children in their writing attempts (Bingham et al., 2017). There are three distinct kinds of supports: physical (e.g. guiding a child’s hand during letter-writing), visual (e.g. pointing to a letter to write), and oral (i.e., teachers’ remarks).
These are described in the following section; however, I anticipated that oral supports would be the most common kind of support. Consequently, before developing the coding scheme, I determined specific teacher remarks that were excluded from coding as potential oral supports.

**Oral Supports: Defining “remark”**. As in previous research (Hindman, Wasik, & Erhart, 2012), we defined a remark as one unique idea. For example, during small group, as children were working journaling their favorite zoo animal, the teacher asked, “Do you remember our story yesterday about the zookeeper? What types of animals can we find in the zoo? You are going to write about your favorite zoo animal. What is your favorite zoo animal?” Each of these four remarks would be counted as a separate idea, and thus potentially a separate writing support. All writing support remarks were coded, including both questions and comments that teachers spontaneously provided and those that they used in response to children.

**Oral Supports: Excluded Remarks**. Some teacher remarks related to writing were excluded from coding. First, teachers were frequently observed repeating nearly verbatim questions to children or repeating what the child said. Because the aim of these remarks was to maintain child attention to the conversation and not to further support writing, repetitions were omitted. In the following example, the counted writing supports are italicized. Teacher: “Why do you think I put a question mark here? Why do you think I had to put a question mark here? [Repeat Self] Why do you think, Layla? [Repeat Self] Child: Because you asked a question. Teacher: Right. Because I asked a question. [Repeat Child] When I ask a question, I use a question mark.” In this example, repeated remarks were not counted, but the follow-up teacher remark (“When I ask a question, I
use a question mark”) counted because the teacher was helping children to connect teacher remarks and child responses, not merely repeating.

Second, teachers sometimes used directives to manage behavior and attention of children to the task. An example of this would be, “Today we are going to write in our journals,” which, while technically related to the subject of writing, would not be considered a writing support because its purpose is to draw attention to begin a new activity. As a further example of directing behavior, teacher remarks such as “Take out your pencils” or “Stop it and look up here” were considered to direct child attention to the task and not to support child writing.

Third, another frequent remark was praise or appraisal such as, “Excellent; I love the details in your picture” or “Okay, that’s a good answer, Devon.” Praise was not included in writing-related coding because it did not serve to advance the lesson.

Fourth, several patterns of talk were excluded as well, although they happened infrequently. These less frequently used remarks were (a) interrupted ideas, (b) breaking from instruction to talk to other adults, and (c) requesting child restatement. (a) When the teacher started to speak but was interrupted and unable to finish a remark, it was unclear exactly what the aim of the remark was and so was omitted from analysis. An example is: “My morning message is . . . Sit up, Jalean.” (b) In some instances, the teacher broke off from instruction to speak to an aide or another adult: “Did he already use the bathroom today?” (c) Lastly, requesting children to repeat themselves was also excluded: “What did you say?” or “Say that again.”

Codes for Oral Writing Supports – Main Categories
Supports were first categorized according to writing skill component: Concepts of Print, Alphabetic Principle, Vocabulary, Syntax, Pragmatics. For a comprehensive explanation, see the coding scheme in Appendices B-F).

**Concepts of print.** Within Concepts of Print, teachers were observed supporting Print Concepts (PC) (e.g., I put a capital letter at the beginning of a sentence.”) and Directionality (D) (e.g., “Where do I start writing?”).

**Alphabetic principle.** In regards to supporting the Alphabetic Principle, teachers were observed targeting Letter Knowledge (LK) (e.g., Circle the letter k in this word), Letter-Sound Correspondence (LS) (e.g., “What letter makes the /m/ sound?”), and Letter Formation (LF) (e.g., “Y slants from the dotted to bottom line”).

**Vocabulary/Semantics.** Vocabulary/Semantic supports were broken down into Sight Word (SW) and Diverse Vocabulary (V) supports. Sight word supports targeted word recognition such as, “Who can find the word and in our message?”, whereas supporting diverse vocabulary required teachers’ to support words (i.e., conceptual level) children could use in their writing, for example, “A sibling is a brother or sister.”

**Syntax.** Supporting child syntax entailed expanding or recasting child utterances or teachers’ expansions to model syntax constructions that would help craft an idea during writing. Syntax supports were given the code (SYN) (e.g., “You mean you went swimming with your mom, not you go to the swimming”).

**Pragmatics.** Lastly, Pragmatics was broken down into subcategories. We found that teachers were supporting Brainstorming (PB), Clarity and Attention to Topic (PA), Elaborating Details (PE), and Genre Development (PG). Brainstorming supports helped children generate ideas before writing such as, “What other animals are at the zoo?”
Clarity and Attention to topic helped children to clarify and maintain attention toward a topic during writing: “You are supposed to be writing about your grandparent not your mom.” Elaborating details supports helped children to include more details into their writing: “Where do you and your grandfather like to cook?” Genre development supports helped to build children’s awareness of a particular genre. An example would be “The ending of a letter tells us who wrote the letter”.

First level coding consisted of reading transcripts and coding each teachers’ oral writing supports as one of the categories above: PC, LK, LS, LF, D, SW, V, SYN, PB, PA, PE, or PG. Subsequently, rounds of coding added sub-codes, as below.

*Sub-Codes for Oral Writing Supports – Questions vs. Comments*

I further coded each of these oral writing supports according to how teachers used them in conversation: for each support, teachers were either eliciting responses from children (questions) or they were providing information to children (comments). When teachers attempted to elicit a child response, we coded the remark as a question using a Q code. To illustrate, the question “What letter is this?” was related to letter knowledge, and so it was coded as: LK-Q. In contrast, a comment example would be “This is the letter m.”: LK-C. Further, commands for a response were also coded as questions, such as “Tell me this letter” LK-Q because it required a child’s answer.

*Parallel Sub-Codes for Physical and Visual/Point Writing Supports*

While oral writing supports could be questions or comments, there were occasions on which teachers would offer an oral support and then reinforce that with a gesture, specifically pointing to or pointing out something as a visual support. Point supports involved the teacher asking the child to look at a particular resource in the classroom or
asking the child to look at something specific, like a letter, the child could use an example in order to answer teachers’ questions. These non-verbal, visual supports were coded POINT. For example, a teacher might say, “Go ahead and take a look at our word wall,” and gesture to the area in the classroom with words listed for children’s reference. This would be coded as SW-POINT-ID. As a further example, if a teacher said, “This right here is letter M” as she tapped the letter M on the board would receive two codes: one for the remark and the other for the gesture. While the remark would be coded as LK-C-ID, (i.e., Letter Knowledge, Comment, Identification) the action of tapping on the letter, additionally, would be coded as LK-POINT-ID. Lastly, teachers were observed physically supporting children’s hand movement, placing hand over child’s hand to help the child write. I coded these as physical supports (PHYS). These physical supports always supported either letter formation or directionality. As an example, if the teacher said, “Start at the top line,” and then physically guided the child’s hand so that the writing utensil touched the top line, as with teacher’s point gesture, these physical supports also received a code separate from the remark. The remark would be coded as LF-C-ID, while the physical support would be coded as LF-PHYS-ID.

*Sub-codes for Oral Writing Supports – Demand*

Additionally, we determined the nature of the task teachers were presenting to children with each support (PC, LK, LS, LF, D, SW, V, SYN, PB, PA, PE, or PG), regardless of how it was framed (question or comment). I coded five specific kinds of demands – identification, modeling, application, connection, and explanation. In general, modeling and identification reflect more concrete tasks whereas application, connection, and explanation reflect more abstract tasks.
Identification. To begin, a teacher who asked, “What letter is this?” while pointing to a letter was eliciting direct identification within an immediate context. The immediate context provided direct examples for children, like the teacher pointing to a letter from the morning message for the child to see. As such, “What letter is this?” received the code [LK-Q-ID]. To illustrate further, “What letter-sound do you hear in /m/ mom?” (stretched sound) received the code [LS-Q-ID]. Both were identification questions targeting a different skill, in the former instance letter knowledge, and the latter, letter-sound correspondence. Teachers also used comments for identification, such as “This is the letter B” [LK-C-ID], or “Lowercase y cuts the line” [LF-C-ID]. Other examples include “What are you writing about?” which falls under pragmatics/attention to topic, question, identification level [PA-Q-ID], as the teacher asks the child to identify topic while writing. A further example of identification would be, “There is grass outside at a park,” which is pragmatics/elaboration, comment, identification [PE-C-ID]. Here, the teacher directly identified an elaborated detail the child could use to elaborate a detail during writing.

Modeling. There were instances, like in the case of brainstorming, directionality, or letter formation, where teachers needed to model a process for children. A modeled process directly showed children how to carry out a writing task. As an example, before beginning a writing task, one teacher told children the topic of her written piece, stating, “My morning message today is about Fall.” This remarks represents Brainstorming (PB) – Comment (C) – Modeling (MOD). In this case, the teacher directly told children Fall would be the topic that would generate ideas of the message, modeling idea generation.
As another example, teachers sometimes physically modeled how to write letters, directing children to watch carefully as they demonstrated [LF-C-MOD].

Lastly, many teachers wrote in front of children to model directionality of print-D. We wanted to capture the different ways teachers modeled and helped children understand directionality of print especially during morning message setting. So we broke down Modeling directionality of print into 3 kinds. We observed that teachers wrote words as children watched, coded as [D-MOD]. Teachers also pointed to and read aloud words that they had written [D-POINTS/READ], modeling that letters make up words that can be read. Lastly, teachers pointed to and read aloud words they had written while children repeated the words written [D-POINTS/CHILDREAD], modeling that what is written can be read by others.

Application. With regards to using both vocabulary and sight words, we found that teachers asked children to take a word and extend their understanding of that word in a new context. For example, a teacher might first point out the word the in a passage (modeling) and then ask the child to find the word in a different sentence (identification). Finally, the teacher might say, “Now write our sight word, the, in a sentence for me.” [SW-Q-APPLY]. In the same way, we found teachers asking children to apply vocabulary words within a new context, such as “If the leaves were falling from trees, do they have chlorophyll in them?” [V-Q-APPLY]. It should be noted that all APPLY codes were questions because it required children’s response.

Connection. Teachers were also observed making or eliciting connections, which were coded as CON. Teachers made or elicited connections between letter knowledge and letter-sound correspondences to words not currently displayed. For example,
sometimes teachers first questioned a child at an initial identification level. “Circle letter s [LK-Q-ID]. What sound does letter s make?” [LS-Q-ID], but then gradually required the child to use letter or letter-sound knowledge in a new way. “What other word do you know has the /s/ sound?” [LS-Q-CON] or “There are three students in here whose name begins with the letter s.” [LK-C-CON]. Similarly, during a writing task, the teacher may connect a past learning experience to help children attend to a topic during writing. “Remember yesterday we read how Jose likes to go fishing with his grandfather?” [PA-C-CON]. To help the child maintain focus on the topic, the teacher connects to a prior learning experience for the child to use as a model to then apply to her own writing.

Teachers also supported Brainstorming and Elaboration by having children connect to past learning or personal experiences (See Appendix E for further examples).

Explanation. Teachers also explained the functions and purposes of directionality and print conventions and, in so doing, invoked an absent audience. For example, “I have to leave spaces to show that my word ends and another begins.” [D-C-EX] or “Why did I put a question mark here?” [PC-Q-EX]. Such remarks relayed functions of the writing system to communicate to an audience. Explanations also included explicit explanations and examples of vocabulary words (V-C-EX) (e.g., “Interact means to do things together.”)

Taken together, the codes ID, MOD, APPLY, CON and EX helped to capture the nature of the task that teachers offered to children as they worked together on a writing activity.

Inter-rater Reliability
To assure the reliability of the coding procedures, point-by-point agreement was calculated for 5 out of the 15 teachers (33% of the corpus) across the two settings (i.e., morning message and small group) by the first researcher and another doctorate graduate who works in early childhood settings. First, the second scorer was trained in the coding scheme and procedures, coding together 4 videos (2 from morning message and 2 from small group). Next, the second scorer coded teacher writing supports for 10 out of the 30 videos independently (5 for morning message and 5 for small group), which were lastly checked against the main codes and scores of the first researcher.

During morning message, out of the 234 master codes, 27 were misses. For small group, out of the 327 master codes, 23 were misses. Actual agreement was 89% and 93% for morning message and small group, respectively, indicating that the coding scheme could be reliably applied. Any disagreements were resolved to arrive at final scores for each instructional setting.

**Data Reduction: Aggregating Codes**

As in the Literature Review, the quality of teachers’ writing supports during composing can be conceptualized in multiple ways, each offering unique insights into children’s instructional experiences. Accordingly, we aggregated codes in several ways to understand the quality of teachers’ writing instruction. We calculated the total amount of writing supports used, the proportion of writing supports that targeted children’s language skills, the total number of different skills that were targeted, and the total amount of each abstract support (i.e., EX, CON, APPLY).

**Total Amount of Supports.** For each teacher, their Total Amount was calculated by summing together every instance of their using a writing support, whether it was oral,
physical, or visual. We also summed across Morning Message and Small Group. Teachers with higher values used more writing supports over the course of the observation periods.

*Proportion of Language-Focused Supports.* For each teacher, to calculate the extent to which their support during writing tasks focused specifically on children’s language skills (rather than code-related skills), we summed all of the language-based supports (e.g. diverse vocabulary, syntax, brainstorming, attention to topic, elaboration, and genre development supports) that each teacher was observed using. In other words, we created one value for Morning Message that comprised all Vocabulary-related codes (whether they were comments or questions, and regardless of the nature of the task from identify, model, etc.), as well as all Syntax-related codes, etc. We then divided this value by the total number of writing supports. (As a minor detail, we calculated proportions for Morning Message and Small Group separately and then averaged them.) Teachers with a higher proportion of language-related writing supports emphasized language-related skills in their writing guidance, suggesting these teachers were encouraging children to communicate a message, or compose, instead of encouraging isolated code-related skill practice, such as spelling words or practicing handwriting separate from a communicative context.

*Variation in Types of Supports.* Type supports captured teachers’ variety of supports used during instruction. As above, we coded writing supports during morning message and small group as related to one of 12 early language and literacy skills. Here, rather than summing all the instances of teachers’ supports (as in Total Amount and Proportion of Language-Related Supports), we calculated how many of these 12 potential...
skills teachers had ever targeted in a support. Thus, the maximum score a teacher could attain on this metric was 12, indicating that she/he had addressed each child skill area at least once. We then divided the teacher’s total score by 12, so that we created a proportion representing the overall percentage of potential skills that the teacher actually addressed. For example, if a teacher in kindergarten supported letter knowledge, letter-sound correspondence, sight word identification, and conventions of print during morning message, the teacher would have targeted 4 out of the 12 overall skill types, or .33. We then averaged teachers Type score across Morning Message and Small Group, obtaining one final score representing how varied the skills that teachers targeted in their writing supports were.

Abstract Supports. Abstract supports went beyond modeling and identification supports. These supports were categorized as Explanations, Connections, and Application. All supports that fell into these three categories were summed across morning message and small group instruction for a total abstract support score.

Global Instructional Quality

The global quality of the language exchanges in the classroom was evaluated from the videos using the Instructional Support domain of the Classroom Assessment Scoring System (CLASS) (Pianta, La Paro, & Hamre, 2008). In this particular research, we focused on the Language Modeling, Quality of Feedback, and Concept Development subscales because these subscales best capture literacy and language instruction. Observers rate teachers’ literacy and language interactions with children on a scale of 1-7. Higher scores on CLASS capture the greater extent to which teachers incorporate best practices that have been shown to increase child literacy and language growth. Two
graduate students were rigorously trained by a certified CLASS expert, attaining reliability of 85% agreement on all scores. The CLASS were then averaged into a single CLASS domain score.

**Teacher Syntactic Complexity**

As in the Literature Review, teachers’ complex syntax was conceptualized as the extent to which teachers embedded clauses in their interactions with children, thus, we used a clausal density measure (e.g., subordinate clauses embedded within an independent clause).

**Language Samples**

Language samples consisted of teachers’ 100-word utterances from morning message and small group videos in the fall, for a total of 30 language samples, and a total of 200 words per teacher. We analyzed 100-word utterances in light of past linguistic research indicating that this approach may be a more valid control for amount of talk when analyzing complex syntax at the clausal level than controlling for video length (Hutchins, Brannick, Bryant, Silliman, 2005). We used teachers’ cue to children when starting an activity as a starting point for transcription according to past research (Cabell et al., 2015; Dickinson & Porsche, 2011). For morning message, transcription started when the teachers began to address the children about the message of the day, which usually began immediately. In small-group activity, we waited until teachers began interacting with children and the materials of the lesson rather than recapping directions for the activity (approx. 3 min. into the video). In this way, we ensured that the 100-word language sample we chose represented actual, content-focused instructional interactions.

**Transcribing**
All videos were transcribed by the first researcher and parsed into communication units (C-unit; Loban, 1976), using the conventions outlined in the Systematic Analysis of Language Transcripts software (SALT; See Miller & Iglesias, 2012, for a complete overview of the conventions).

The C-unit (or communication unit) represents a complete idea, with at least one subject and one verb that cannot be divided up into smaller parts without changing its meaning. During transcription, each C-unit is entered as a separate line. Specifically, the sentence, “The cat sat on the mat” includes one C-unit, while the sentence “The cat sat on the mat, and a nearby bird intently watched him” contains two C-units and would be transcribed into two separate lines. As a third example, the sentence, “The cat sat on the mat while he watched a nearby bird” cannot be broken into multiple pieces without changing the meaning of the sentence, and thus includes one C-unit and, consequently, one line. All transcriptions were reviewed twice for accuracy and a second reviewer, a linguist, reviewed 10% of the total transcriptions. An inter-rater reliability score of 85% was obtained on transcribing and segmenting of speech into C-units.

Subordination Index

Subordination Index (SI) was then calculated (SALT; Miller & Iglesias, 2012), which was the proportion of total clauses to C-units. SI has been used extensively to study both written and oral language in children, adolescents, and adults (Mason et al., 2013; Masterson et al., 2006; Nippold, Ward-Lonergan, & Fanning, 2005; Scott, 1995) and is described as capturing sophistication, variety, and depth of syntactic structures (Loban, 1976; Noris & Ortega, 2009; Scarborough, 1990). Specifically, the SI index captures the ratio of subordinate clauses to C-units which, in theory, could potentially
contain multiple subordinate clauses. This measure targets the complexity of the teacher’s talk because a higher SI score indicates greater numbers of embedded, dependent clauses within a C-unit. An inter-rater reliability score of 95% was obtained on calculating SI index. Because of the high correlation between teachers’ SI scores across conditions ($r = .812, p = .000$), teachers’ SI score in small group and morning message was averaged to create a composite Fall SI score for analyses.

Child Vocabulary

In the fall, the Peabody Picture Vocabulary Test-4 (PPVT; Dunn & Dunn, 2015) was administered by trained assessors. In this assessment, children match a spoken word to one of four pictures, assessing receptive vocabulary level. The PPVT is a standardized, norm-referenced assessment that yields raw and standard scores. For this research, standardized scores were utilized in analyses.
CHAPTER 4
RESULTS

Research Question 1: Nature of Morning Message

Teachers spent on average 13 minutes during morning message (SD = 6.9, range = 6-31 min.).

Overview

Code-Related Skills (Transcription)

Taken together, the Alphabetic Principle, Concepts of Print, and Sight Word Recognition comprised what has been termed code-related skills, those skills related to emergent literacy. Within the Simple View Framework, these early emergent skills would comprise handwriting and spelling components of early writing related to transcription. However, sight word recognition would be considered part of the semantics/vocabulary component, but we calculate sight word supports as an aspect of transcription in that sight word recognition helps children with ease at encoding those words while writing (i.e., transcription), not necessarily helping children translate ideas using language, specifically knowledge of words at a conceptual level. Thus sight word recognition supports were not considered language-based supports related to translation. In total, 678 supports focused on developing children’s emergent literacy skills, or code-based skills. On average, teachers used 45 supports (SD = 18.1, range = 18-72) during their morning message instruction related to the Alphabetic Principle, Concepts of Print, and Sight Word Recognition from Semantics/Vocabulary.
Language-Related Skills (Translation)

In contrast, a total of 127 supports (M= 8.4, SD= 6.68, range = 0-22), accounting for 16% of all supports across morning message were tallied for language components related to translation in early writing development (i.e., Vocabulary, Syntax, Pragmatics/Discourse). Teachers evenly targeted two language components: vocabulary (61 supports) and pragmatic/discourse, mainly, related to brainstorming (65 supports). Noticeably, child syntax was not directly targeted. Figure 1 and 2 shows charts, differentiating amounts of transcription (i.e., Alphabetic Principle, Concepts of Print, Sight Word Recognition) and translation supports (Vocabulary, Syntax, Pragmatics/Discourse) for morning message and small group.

Alphabetic Principle

Overall, teachers supported skills related to the Alphabetic Principle most during morning message. Further, the most targeted skill of the Alphabetic Principle was letter knowledge, although teachers also supported letter-sound correspondence. Letter knowledge and letter-sound correspondence were, generally, on the level of identification. Letter formation was not being supported during morning message.

In total, 36% of supports focused on developing skills related to the Alphabetic Principle (M= 19.4, SD = 18.85, range = 0-61) during morning message. Teachers’ Alphabetic Principle supports totaled 290. All but 3 teachers supported skills related to the Alphabetic Principle.

Within the skill sets related to the Alphabetic Principle, teachers’ instructional support for letter knowledge was highest, representing 22% of all Morning Message supports, or 63% of Alphabetic Principle supports in particular (M= 12.07, SD = 12.07,
Next, letter-sound correspondence supports were 13% of the total supports used during Morning Message (M= 7.07, SD= 8.1, range = 0-23), and 36% of supports related specifically to the Alphabetic Principle. There were four teachers who did not support letter knowledge at all, and seven, or about half the teachers, did not support letter-sound correspondence at all. Conversely, only 4 supports, less than 1%, focused on letter formation and only two out of the 15 teachers in our sample supported letter formation.

Support was generally at the identification level, such as “This is the letter p.” or “Find letter p.” In our sample, we did not observe teachers connect or ask children to connect letter knowledge outside of the immediate context (e.g., the message). Additionally, teachers tended to engage children in finding letters (128 supports) more so than identifying the letters for children (53 supports), indicating that teachers may be inclined to use morning message to reinforce child letter knowledge and to engage children to connect letters they were learning for the week. Likewise, teacher support for letter-sound correspondence was generally at the level of identification. Only 3% of Alphabetic Principle supports involved connecting a letter-sound from the message to an outside context or previous experience, such as “What other word can you think of that starts with the /m/ sound?”

Concepts of Print

Concepts of Print was the second highest supported writing component during morning message. Within Concepts of Print, print convention skills were being supported most and these supports did include a substantial amount of abstract supports. The
majority of abstract supports were supporting print conventions. Teachers were also
supporting directionality typically on the level of modeling.

Supports for Concepts of Print included 271 supports across morning message,
accounting for 34% of all supports teachers used. Although slightly less than Alphabetic
Principle support totals, every single teacher supported Concepts of Print during morning
message. On average teachers provided 18.07 supports (SD = 14.26, range = 3-48)
developing Concepts of Print. Of the 271 supports, 169, or 63%, were related to print
conventions (e.g. punctuation, words make up sentences, sentences are complete ideas),
while 38% were related to directionality of print (e.g. writing from left to right, spaces
between words).

Teachers supported print conventions on average 11.27 (SD = 13.86, range = 0-
45) times during morning message, which was 21% of all supports, second but similar in
amount to letter recognition (22%). However, 4 teachers did not support print
conventions. Teachers were commonly observed explaining or eliciting children to
explain or to give examples demonstrating functions of print convention, such as “So
when we are writing, all thoughts or sentences need to end with a punctuation mark.” or
“Why do I need to put a question mark here?” The majority of abstract supports were for
print conventions. Teachers’ explanations of functions of print accounted for 62% of all
abstract supports (APPLY, CON, EX). During morning message, teachers used EX
supports most when directed at print convention development (M= 4.4; SD = 11.03,
range 0-31).

Directionality supports accounted for 13% of all writing supports; there were, in
total, 105 different instances of teachers using this support. On average teachers used 6.8
directionality supports (SD = 3.80, range = 2-14) during morning message. Additionally, all teachers modeled directionality during morning message. All but two wrote the message as children watched. All but one read the message to children while pointing out the words. Finally, all but one read the message, pointing to words, with children.

The majority (86%) of all directionality supports were modeling. In fact, only 14 of the 105 directionality supports were devoted to teachers identifying or asking children to identify directionality of print (e.g., “Where do we start our message?”). Further, only one teacher used more abstract supports for directionality, such as explanation (EX): “We have to leave spaces between words to show we are moving onto the next word.”

Vocabulary/Semantics.

Teachers were mainly observed supporting semantics, such as sight word identification over supporting sophisticated vocabulary development, such as using unit vocabulary words or defining words used in the message. However, some teachers were using morning message to explain or ask children to apply vocabulary words related to unit concepts.

Together Vocabulary/Semantics amounted to 177 supports across morning message. The majority of supports (66%, or 116) in this category were related to sight word recognition. Most teachers, 73%, supported sight word recognition during morning message. Of the 116 sight word supports, all but 8, or 93%, were identification and modeling. However, two teachers did challenge students to apply sight words to their own sentences. Additionally, most sight word recognition supports were in the form of questions (63%), such as, “Who can come up and circle one of our sight words,” a strategy that teachers used to reinforce skills connected to the school week’s curriculum.
Overall, teachers used 8 supports during morning message dedicated to sight word recognition, which was the third most targeted skill (15%) behind conventions of print (21%) and letter knowledge (22%).

In contrast, only 8% of language supports were devoted to vocabulary development overall. Generally, teachers used about 4 vocabulary supports (SD = 4.78, range = 0-14) during morning message. Interestingly, of the 66 vocabulary supports, 35 were coded as abstract (i.e. APPLY or EX), or 57%. It was apparent that some teachers were using morning message to reinforce vocabulary words from the classroom’s unit of study. In fact, 10 of the 15 teachers, 67%, at least referenced vocabulary words, and 7 of those 10 explicitly defined, explained, gave examples, or asked children to apply a vocabulary word in a new context to facilitate conceptual understandings of words. Most vocabulary supports were questions in contrast to statements, 40 supports to 21, respectively, and 80% of abstract supports were questions (e.g., asking children to apply vocabulary word knowledge). An example of these abstract questions would be, “Who is your sibling?”

Syntax

Generally, teachers did not support child syntax development. In contrast to vocabulary supports, only one support was used to develop child syntax, and this support was rather implicit and unintentional. A child responded to a question about what he likes to do with his family by answering that he liked “to go to the swimming.” Another child quickly corrected, “No, you can’t say that. You went to the pool.” To which the teacher then repeated and corrected the child utterance, “Yes, you and your mommy like to go to the pool.” In this instance, the regularity of hearing an article “the” before a noun or the
commonality of the derived structure of the prepositional phrase (i.e., preposition + object of the preposition) instinctively made the comment wrong to some of the children, but the teacher did not explain further the function of prepositional phrases or model differences between infinitives (e.g., to go/ to swim) and participles (e.g., swimming).

**Pragmatics**

During morning message, most teachers supported brainstorming before writing; however, most supports were modeling to children and did not include children in the generation of ideas. Overall, teachers did not support attention to topic, elaboration, or genre awareness during writing.

Because morning message provides an opportunity for teachers to model a writing process, supports related to brainstorming were highest. In fact, 11 out of the 15 teachers either modeled brainstorming (e.g., “My message is going to be about the Fall”), connected unit concepts to generate ideas (e.g., “We know that leaves change color during the fall”), or asked children to connect to past concepts to generate ideas (e.g., “What else did we learn about leaves?”). There were a total of 61 supports related to generation of ideas surrounding a topic to write about (M=5, SD = 4.67, range = 0-14). The majority of these supports were comments (85 %). In other words, teachers did not generally incorporate children’s idea generation into the morning message, but rather modeled aloud their own process of generating ideas because they did not ask children to contribute to idea generation.

Further, out of the 65 supports, 43 made connections to past unit concepts, learning or personal experiences while generating ideas. All but two teachers connected the message to unit concepts, drawing upon prior or upcoming classroom experiences to
create a message. (e.g., “We know that in the Fall, the leaves start to fall from the trees.”)
There were no instances of teachers’ topic clarification or elaboration, and only 4
instances of developing genre awareness, all of which were related to the rules of writing
a letter to someone.

Research Question 2: Nature of Small Group Writing

Overview

On average teachers spent 10 minutes (SD = 3.26, range = 5-14 min.) with 5
children in small groups (SD = 0.88, range = 3-7). Additionally, 9 teachers used a
composing task during small group, whereas 5 teachers focused on name/letter writing or
on spelling words, and 1 teacher worked with children on a sentence copying task.
Teachers total writing supports across small group was 785.

Because the majority of teachers used a composing task during morning message,
there was a substantial increase in teachers support for language skills related to child
translation, specifically, pragmatics/discourse skills. Generally, teachers supported
brainstorming and attention to topic. Less attention was given to supporting child
elaboration and vocabulary, and little to no attention was given to genre awareness and
syntax. Despite the increase in language supports, the majority of teachers’ support was
still for code-based skills related to transcription.

Code-Based Skills: Transcription

As in morning message, teachers supported the Alphabetic Principle most with
the greatest frequency for letter-sound correspondence then letter knowledge supports.
Letter formation was only supported by the three teachers who chose to focus on isolated
handwriting instruction during small group but not during composing tasks. Lastly
regarding Concepts of Print, teachers generally supported print conventions by explaining or eliciting explanations of the functions of print and supported directionality through identifying and modeling, similar to morning message.

**Language-Based Skills: Translation**

In total, 458 supports focused on developing children’s emergent literacy skills, or code-based skills related to transcription. On average, teachers used 31 supports (SD = 16.9, range = 4-71) during their small group instruction related to the Alphabetic Principle, Concepts of Print, and Sight Word Recognition.

For language-based supports related to translation during writing (i.e., Vocabulary, Syntax, Pragmatics/Discourse), a total of 339 supports (M = 22.6, SD = 21.9, range = 0-65), accounting for 43% of all supports across morning message, were tallied. Once again, child syntax was not directly targeted. Figure 1 and shows charts, differentiating amounts of transcription (i.e., Alphabetic Principle, Concepts of Print, Sight Word Recognition) and translation supports (Vocabulary, Syntax, Pragmatics/Discourse) for morning message and small group.
Figure 1. Amount of Transcription and Translation Supports by Setting

Transcription and Translation Supports by Setting

Support Amount

Instructional Setting

Morning Message

Small Group

Transcription

Translation
Figure 2. Amount of Early Writing Skills (Transcription and Translation) by Setting

**Alphabetic Principle**

Alphabetic Principle supports were prominent (M=16.86, SD = 16.05, range = 0-61), accounting for 36% of supports overall. Of Alphabetic Principle supports, those relating to letter-sound correspondence had the highest frequency (M=8.2, SD = 13.21, range = 0-48), accounting for 16% of all supports. However, for all 123 supports, teachers’ support stayed at the level of identification, and teachers evenly either identified letter-sound correspondences via comments (e.g., 61 supports) or, via questions-had children identify letter-sound correspondences (e.g., 62 supports).

Although letter knowledge was the highest supported skill during morning message, in small group teachers’ support for letter knowledge was 62 supports in total as compared to 181 in morning message, accounting for 8% of all supports during small
group. Like letter-sound correspondence, all supports for letter knowledge were on the level of identification. Interestingly, the majority of supports for letter knowledge were teacher identification of letters rather than teacher eliciting child identification of letters, 41 to 17, respectively, a result not mirrored in the letter-sound correspondence supports. Together, letter knowledge and letter-sound correspondence support accumulated a total of 185 supports across small group, or 24% of all supports. This amount stands in contrast to letter formation support.

Only 3 teachers chose the small group setting to focus on handwriting. Further, only two other teachers (providing only one support each) supported letter formation during a composing task. Letter formation had a total 92 supports (M= 5, SD = 8.64), representing 35% of Alphabetic Principle supports, 11% overall during small group, but only 5 teachers or 33% of all teachers supported letter formation in contrast to letter knowledge and letter-sound knowledge in which 93 % or 14 out 15 teachers supported. Interestingly, combining both morning message and small group totals, letter formation was one of the least supported skills during writing instruction, accounting for only 5.5 % of all supports observed across the two settings, whereas letter knowledge and letter-sound correspondence accounted for 31% across the two settings.

Concepts of Print

Supports related to Concepts of Print totaled 158 during small group (M=10.53, SD = 10.9, range = 0-38), or 20% overall. All but three teachers supported Concepts of Print during small groups. Teachers focused slightly more on directionality (M=5.8, SD = 4.14, range = 0-14) than they did conventions of print (M=4.7, SD = 9.27, range = 0-32), or 55% and 45%, respectively, contrary to morning message where convention supports
had a higher frequency. The majority of directionality supports were on the level of identification and modeling, 96%, similar to morning message. Different from morning message, where modeled directionality was overwhelmingly salient, directionality supports during small group included teachers identifying directionality for children, 59/87 or 68% of directionality supports (e.g., “Start at the left.”). In this way, during small group teachers guided, more so than modeled, children’s conception of directionality as they were writing.

Conventions of print supports represented 45% of all Concepts of Print supports during small group, accounting for 9% of total supports across small group. However, only 6 out of 15 teachers supported concepts of print as opposed to 13 out of 15 teachers who supported directionality during small groups. Similar to morning message, where 39% of convention supports went beyond identification and modeling, 31% of convention supports during small group involved explaining functions of print. Teachers were generally using both comments and questions evenly as well.

**Vocabulary/ Semantics**

Vocabulary and semantics comprised a total of 57 supports. 14 of those 57 supported sight word recognition, while the majority, 43 or 75%, supported vocabulary knowledge in contrast to morning message. There was 1 high support for word recognition and 9 for vocabulary, which was 21% of the vocabulary supports. However, 6 of the 15 teachers, 40%, did not support vocabulary at all.

**Syntax**

Similar to morning message, teachers were not supporting syntax. Child syntax had no supports during small group writing.
Pragmatics/Discourse

Within pragmatic/discourse support, the highest frequency of support was attention to topic/clarification. These supports worked as attentional pulls to stay on the topic during writing tasks. (e.g., “You are supposed to be writing about your grandparent.” or “Is this your grandfather here?”). Teachers supported child attention towards topic 171 times during small group instruction, accounting for 63% of all pragmatic supports, 50% of all language-based supports, and 22% of all supports total. Interestingly, attentional topic supports were the most targeted skill during small group writing instruction. The overwhelming supports dedicated to attention towards topic upholds the Simple View of writing suggesting that early writing abilities take up significant cognitive load to the extent that children struggle to maintain attention toward higher level processes associated with language (ideas) to print translation (Fayol, 2017).

In response, a majority of teachers, 67%, supported child attention towards topic while writing. Additionally, 19% of those supports were more abstract in that they provided or elicited connections. We observed that in order to bring children back to the topic or clarify the topic, teachers were connecting to personal or text experiences to serve as examples for children. An example of such a clarifying connection would be, “So remember yesterday we read the story about the boy and his grandfather” or “I went to the movies with my sister because that’s something we enjoy together.”

Although less frequent, 6 teachers also supported child elaboration of detail during writing. On average, teachers provided 2.3 supports (SD = 3.5, range = 0-11) across small group writing instruction, prompting or questioning the child to add details for an audience. Elaboration supports accounted for 12% of pragmatic supports, 10% of
language-based supports, and 5% of overall supports across small group instruction. Additionally, 9 supports, 26% of elaboration supports, also elicited or made connections. Similar to topic attentional supports, we observed teachers connecting child experiences to help the child elaborate details (e.g. “If you were at the playground, what else would you see?”). Taken together, topic attention and elaboration supports, two pragmatic supports related to monitoring child attention during writing, tallied 206, accounting for 26% of all supports.

Teachers also supported generating ideas before writing. We observed 8 teachers supporting brainstorming, on average 4.8 times (SD = 6.9, range = 0-26) during small group. Similar to morning message, the majority of brainstorming supports were high level 45/72, or 63%. Also similar to morning message was the rarity of supports for genre knowledge. Only one teacher supported genre knowledge. In small group, the teacher and students were writing a summary of the story they read. The teacher drew attention to include aspects of narrative beginning (characters, setting, problem) and the end (how the problem was resolved). In total, the teacher used 10 supports for genre knowledge. However, 14 out of 15 teachers did not support genre knowledge at all.

Comparison between Quality Variables in Morning Message and Small Group

Paired sample t-tests revealed no differences across settings (i.e., morning message and small group) for total amount of supports: $t(14) = .398$, $p = .699$, different types of support: $t(14) = -.097$, $p = .924$, or total abstract supports (i.e., explanations, application, and connections): $t(14) = .592$, $p = .563$. However, teachers use of more language-based supports during small groups was significant $t(14) = -2.717$, $p = .017$. As observed, language-based skill supports related to translation increased during small
group writing instruction probably because teachers were using a composing activity. Thus, in small groups teachers were supporting child writing attempts to communicate a message more so than in morning message.

In regards to Quality covariates across conditions (i.e., CLASS and complex teacher syntax), on average, teachers’ global classroom quality rating was 3.03 (SD = 0.88, range = 1-4.5) for morning message and 2.8 (SD=1.56, range = 1-6) during small group instruction. Paired sample t-test revealed no significant differences between mean CLASS quality scores across settings; \( t(14) = 0.594, p = .562 \). For teachers’ complex syntax during interactions, on average teachers Subordination Index score during morning message was 1.31 (SD = .331, range 1.00-2.29), which indicates that on average 30% of teachers’ utterances contained an embedded clause. During small group, the mean score for teachers’ subordination index was 1.23 (SD = .197, range 1.00-1.70). Paired sample t-tests revealed no significant differences between teachers’ use of complex syntax during morning message and small group: \( t(13) = 1.512, p = .154 \). As result, mean global classroom instruction rating and teachers’ complex syntax index across settings (i.e., small group and morning message) was used for analyses along with mean writing quality scores across settings.

**Aggregating Data**

Finally, we aggregated across both contexts to create four summary variables for use in analyses.

*Total Supports.* On average teachers used a total 106.73 supports across morning message and small group (SD = 24.93, range = 56-152).
Proportion of Language-Based Supports. Teachers proportion of language-based supports related to child translation (i.e., Vocabulary, Syntax, and Pragmatics) was averaged across morning message and small group. Teachers’ mean score was .29, indicating that across settings teachers’ language supports comprised 29% of all supports (SD = .22, range = 0-0.70).
Figure 4: Histogram of Language-Based Supports

Type of Supports. Across morning message and small group teachers’ mean type score was .45, indicating that from the 12 possible targeted skills, teachers’ on average supported around 4.5 of the skill types during writing instruction (SD = .118, range = .29-.71).
Abstract Supports. Across morning message and small group, teachers on average used 18.40 (SD = 15.023, range = 0-51) abstract supports, indicating that of teachers’ total supports, 17% were abstract across morning message and book reading.
Research Question 3:

Correlations between Writing Quality and Measures of Language Quality

Quality Correlations during Morning Message

Pearson correlations were conducted between teachers’ writing quality scores (i.e., total, type, language-based, and abstract) and covariates of language quality (i.e., teachers’ complexity of speech and global classroom quality). These analyses revealed that teachers’ average CLASS quality score was related to measures of quality writing. CLASS scores for morning message were associated with teachers’ total writing supports ($r = .647, p = .009$), teachers’ proportion of language-based supports ($r = .752, p = .001$),
and marginally related to variety of skill type supports \( (r = .458, p = .08) \). Abstract supports were not related to CLASS, but were related to teachers’ use of complex syntax \( (r = .750, p = .001) \).

Table 1

*Correlations between Writing Quality Measures, Global Instructional Quality, and Complex Syntax during Morning Message*

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<th>Variables</th>
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<th>4</th>
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<td>.355</td>
<td>.640*</td>
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<td>.143</td>
<td>.517</td>
<td>.750**</td>
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*Note.*  *p < .05. **p < .01.

*Quality Correlations during Small Group*

In small group, teachers’ CLASS quality score was correlated with abstract supports \( r = .533, p = .04 \), skill type variety supports \( r = .598, p = .018 \), and language-based supports \( r = .550, p = .034 \), but CLASS scores marginally related to teacher amount of supports during small group, \( r = .499, p = .058 \). Additionally, teachers use of complex syntax during interactions related to their use of abstract supports \( r = .678, p = .008 \).
Table 2

Correlations between Writing Quality Measures, Global Instructional Quality, and Complex Syntax during Small Group

<table>
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<tr>
<th>Variables</th>
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<tbody>
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<td>1. Quality CLASS</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Total Supports</td>
<td>.499</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Language-Based</td>
<td>.550*</td>
<td>.517*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Different Types</td>
<td>.598*</td>
<td>.723**</td>
<td>.698**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Abstract Supports</td>
<td>.533*</td>
<td>.589*</td>
<td>.554*</td>
<td>.439</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>6. Subordination Index</td>
<td>.291</td>
<td>.276</td>
<td>.227</td>
<td>.310</td>
<td>.678**</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. *p < .05. **p < .01.

Correlations between Composite Quality Scores

Pearson correlation results showed significant correlations between composite CLASS scores and all composite writing quality scores: total amount $r = .641$, $p = .01$, types $r = .731$, $p = .002$, language-based $r = .771$, $p = .001$, and abstract supports $r = .549$, $p = .034$. However, teachers’ global instructional quality rating was not related to the use of complex syntax during interactions $r = .284$, $p = .145$. Conversely, teachers’ abstract supports were related to teachers’ composite complex syntax index $r = .812$, $p = .000$. Teachers who spoke more complexly were using more abstract supports during writing instruction.

Correlations between CLASS Quality Scores and Key Variables

Using Pearson correlation to explore relationships between Quality scores to background and control factors revealed significant relationships. First, CLASS Quality
score was not related to any background factors: grade (PreK vs. K) or degree (bachelor’s vs. master’s), or to teachers’ complex syntax during interactions. Additionally, CLASS scores were not correlated with children’s fall vocabulary score (PPVT), although it approached significance, $r = -.472, p = .07$. Prekindergarten teachers’ mean CLASS scores ($M = 3.31, SD = .843$) were higher than kindergarten teachers’ ($M = 2.43, SD = .932$) but not above the level of chance, $f(1) = 3.724, p = .076$.

**Correlations between Writing Quality and Key Variables**

Measures of Quality Writing showed significant relationships to background and control factors. Language proportion scores were related to grade level $r = -.663, p = .007$. Preschool teachers were embedding more language-based supports than were kindergarten teachers. One-way ANOVA analysis also revealed significant differences in language supports by grade level $f(1) = 10.215, p = .007$. In addition to all writing quality measures correlations to CLASS scores, abstract supports were correlated with teachers’ Subordination Index score, $r = .812, p = .00$. 
Table 3

*Correlations between Composite CLASS Scores and Writing Quality, Control, and Predictor Variables*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Quality CLASS</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Total Supports</td>
<td>.641*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Language-Based</td>
<td>.777*</td>
<td>.651*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Different Types</td>
<td>.731*</td>
<td>.751*</td>
<td>.625*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Abstract Supports</td>
<td>.549*</td>
<td>.682*</td>
<td>.513</td>
<td>.608*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Fall PPVT</td>
<td>.230</td>
<td>.139</td>
<td>.139</td>
<td>.186</td>
<td>.056</td>
<td>-.347</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Grade is K</td>
<td>-.472</td>
<td>-.322</td>
<td>-.663*</td>
<td>-.382</td>
<td>-.026</td>
<td>.326</td>
<td>-.469</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>9. Has Masters</td>
<td>.303</td>
<td>.237</td>
<td>-.133</td>
<td>.285</td>
<td>.255</td>
<td>.255</td>
<td>.171</td>
<td>.134</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note.* *p < .05. **p < .01.

Research Question 4: Predictors of Quality Writing

Ordinary least squares regression (OLS) was used to explore the constructs that predicted teachers’ writing quality (operationalized in this study in four ways: as total supports, abstract supports, variety types of support, and proportion of supports that focused on language). Predictors in fall included degree (bachelor’s vs. master’s), grade level (preK or K), teachers’ level of syntax complexity (Fall SI), classroom quality (CLASS), and teachers’ fall PPVT classroom mean score. Continuous predictors were
centered at the sample mean, and the dichotomous variable was coded so that the reference group had a value of 0, and the other group had a value of 1.

Regression Model for Teachers’ Use of Different Writing Types

In the first model, variety type support was entered as the dependent variable. First, the dependent variable was checked to see if assumptions of OLS were met. Skewness and kurtosis were both in the normal range: .599 and .042, respectively. The regression model accounted for 65% of the variance in type support scores. Results showed only one predictor, teacher CLASS score, predicted the amount of different skill types supported during writing, $\beta = .512$, $p = .047$. The linear relation between type support and CLASS scores was checked, and a scatterplot suggested a linear relationship. Distribution of residuals was next explored. There was a normal distribution for residuals, accounting for CLASS scores in the model: skewness= .085, kurtosis= -.645. Next, homoscedasticity was explored. Using a scatterplot, the variability of residuals across predicted values showed no apparent pattern of homoscedasticity.
Table 4

*Summary of Regression Analyses for Predictors of Type Writing Supports (N=15).*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type Writing Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Composite CLASS</td>
<td>.139</td>
</tr>
<tr>
<td>Composite SI</td>
<td>.233</td>
</tr>
<tr>
<td>FALL PPVT</td>
<td>.004</td>
</tr>
<tr>
<td>Grade is K</td>
<td>-.112</td>
</tr>
<tr>
<td>Has Masters</td>
<td>.031</td>
</tr>
</tbody>
</table>

\[ R^2 = .652 \]

\[ F = 7.682 \]

*Note.  *\( p < .05. \)  **\( p < .01. \)

*Regression Model for Teachers’ Language-Based Supports*

In the second model, the proportion of teachers’ supports targeting language-based skills relative to total supports was entered as the dependent variable. Teachers’ language-based supports were found to be normally distributed: skewness = -.004; kurtosis = -1.23. A linear relationship was shown using a scatterplot. The regression model accounted for 82% of the variance in language support scores. Again, results showed teachers’ CLASS quality score predicted teachers’ proportion of language-based supports in writing instruction, \( \beta = .568, p = .009. \) Additionally, teachers’ education level predicted language-based supports, although marginally \( \beta = -.311, p = .05. \) Teachers who did not hold a master’s degree were more likely to embed language-based supports into
instruction. Lastly, teachers in prekindergarten used more language-based supports, $\beta = -.482$, $p = .023$. Exploring residuals showed a normal distribution: skewness = -.001; kurtosis = -.742. No apparent pattern of homoscedasticity was found.

Table 5

*Summary of Regression Analyses for Predictors of Proportion of Language-Based Supports (N=15).*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>(\beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite CLASS</td>
<td>.130</td>
<td>.039</td>
<td>.568**</td>
</tr>
<tr>
<td>Composite SI</td>
<td>.280</td>
<td>.139</td>
<td>.227</td>
</tr>
<tr>
<td>FALL PPVT</td>
<td>-.003</td>
<td>.008</td>
<td>-.216</td>
</tr>
<tr>
<td>Grade is K</td>
<td>-.206</td>
<td>.075</td>
<td>-.482*</td>
</tr>
<tr>
<td>Has Masters</td>
<td>-.166</td>
<td>.074</td>
<td>-.311</td>
</tr>
</tbody>
</table>

\(R^2 = .823\)

\(F = 14.009\)

*Note.* *p < .05. **p < .01.

Regression Model for Teachers’ Abstract Supports

Exploring unique predictors of teachers’ use of abstract supports during writing instruction using OLS revealed also one predictor. Only teachers’ use of complex syntax during interactions significantly predicted teachers’ use of abstract supports, $\beta = .894$, $p = .001$. The regression model accounted for 76% of the total variance in abstract support scores. Teachers’ abstract supports skewness (.542) and kurtosis (-.379) were checked and found to be in the normal range. A scatterplot revealed a linear relationship between
abstract supports and teachers’ complex syntax. Residual skewness (.774) and kurtosis (-.118) were also in the normal range, and pattern of homoscedasticity was not found.

Table 6

Summary of Regression Analyses for Predictors of Abstract Supports (N=15).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstract Supports</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>B</td>
</tr>
<tr>
<td>Composite CLASS</td>
<td>3.757</td>
<td>3.035</td>
<td>.242</td>
</tr>
<tr>
<td>Composite SI</td>
<td>60.074</td>
<td>12.541</td>
<td>.984**</td>
</tr>
<tr>
<td>FALL PPVT</td>
<td>.837</td>
<td>.527</td>
<td>.389</td>
</tr>
<tr>
<td>Grade is K</td>
<td>-.14.612</td>
<td>8.200</td>
<td>-.502</td>
</tr>
<tr>
<td>Has Masters</td>
<td>1.133</td>
<td>5.547</td>
<td>.031</td>
</tr>
</tbody>
</table>

\[ R^2 \] .759

\[ F \] 9.766

*Note. * p < .05. ** p < .01.

Predictors of Disaggregated Abstract Supports

Because abstract supports created a composite from supports of a differing nature, in that some were explanations while others were connections, and, lastly, abstract supports also asked children to apply within a new context, we further explored predictors of each abstract type of support. Running three separate models where the outcome variable in Model 1 was Connecting Supports, the outcome variable in Model 2 was Explanation Supports, and the outcome variable in Model 3 was Application...
Supports revealed a change in findings reported for the composite Abstract Support variable only in Model 3. Teachers’ total amount of Connecting Supports, $\beta = .519, p = .015$, and Explanation Supports, $\beta = .774, p = .014$, were still only predicted by teachers’ syntax (i.e., subordination index) score. However, in Model 3, there were no predictors of Application supports, but grade level approached significance, $\beta = -.683, p = .058$.

Prekindergarten teachers were more likely to use application supports than kindergarten teachers. So it would seem that explanations and connections, in particularly, are driving the association with teachers’ use of complex syntax with children.

*Regression Model for Teachers’ Total Writing Supports*

Lastly, in the final model total amount of supports was the outcome variable. Skewness (.044) and kurtosis (.075) were checked and found to be normally distributed. A scatterplot revealed a linear relationship between total supports and teachers’ CLASS score. However, CLASS score did not predict total amount of supports used, $\beta = .365, p = .294$. None of the predictors uniquely linked to total supports, and this model only accounted for 27% of the variance.
Table 7

Summary of Regression Analyses for Predictors of Total Writing Supports (N=15).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Writing Supports</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>SE B</td>
</tr>
<tr>
<td>Composite CLASS</td>
<td>9.494</td>
<td>8.463</td>
<td>.368</td>
</tr>
<tr>
<td>Composite SI</td>
<td>39.353</td>
<td>34.978</td>
<td>.388</td>
</tr>
<tr>
<td>FALL PPVT</td>
<td>-.191</td>
<td>1.471</td>
<td>-.054</td>
</tr>
<tr>
<td>Grade is K</td>
<td>-11.886</td>
<td>22.870</td>
<td>-.246</td>
</tr>
<tr>
<td>Has Masters</td>
<td>3.259</td>
<td>15.472</td>
<td>.054</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td>.263</td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td></td>
<td>2.00</td>
<td></td>
</tr>
</tbody>
</table>

Note. *$p < .05$. **$p < .01$. 


CHAPTER 5
DISCUSSION

Summary of Results

This research explored teachers’ language and literacy supports for early writing development during morning message and small group instruction. Importantly, this study provides a meaningful lens in which to understand the ways teachers are supporting early component skills among young children, especially during writing instruction that revolves around teachers and students generating a message to communicate, also called composing in early childhood settings. Similar to one prior study, concepts of print and the alphabetic principle dominated morning message instruction (Hindman & Wasik, 2012). Additionally, this work revealed that teachers mainly engaged children in highly concrete ways, asking for / providing letter identification and modeling writing. However, morning message also involved the more abstract support of explaining or eliciting explanations of the functions of print. Teachers did not support syntax development, letter formation, or genre awareness during morning message composing tasks.

For small group, in contrast, teachers provided more language supports, specifically, attention to topic supports while children were writing. Interestingly, most teachers, 11 out of 15, used a composing task such as journal writing (e.g., Write about something you like to do with your sibling/s), as opposed to isolated handwriting, spelling, or sentence copying tasks. At the same time, teachers neglected to support syntax development, letter formation, and genre awareness during composing tasks. However, two teachers used small group instruction to isolate handwriting practice.
Teachers were also generally embedding alphabetic principle and concept of print skills as well. Teachers’ supports were generally on the level of modeling and identification; however, we did find instances of teachers connecting or asking children to connect to personal or past learning experiences to generate texts.

The results of this study also revealed that CLASS quality scores were correlated to all writing quality measures (i.e., total supports, type supports, language-based supports abstract supports), and teachers’ use of abstract supports was correlated with the complexity of the syntax they used throughout the day. Regressions determined that teachers with higher quality interactions (i.e., higher CLASS scores) used a higher proportion of language-based supports related to child translation, as well as a more diverse array of supports during writing. In addition, teachers who used more complex syntax throughout the day also used more abstract supports during composing (i.e., connections, explanations, and application). Follow-up results, disaggregating the three types of supports that comprised abstract support, revealed that the unique relations between complex syntax and abstract supports were driven primarily by teachers’ use of connections and explanations, not by application supports. In sum, results shed new light on precisely how teachers support prekindergarten and kindergarten children’s writing in classrooms, offering more depth to interactional processes and highlighting specific avenues for potential future PD.

Morning Message Instruction: Emphasis on Code-Based Skills

Analysis of these videos showed that Morning Message was used as an important instructional context, in that several different language/literacy skills were regularly
targeted while teachers worked with children on composing (Kwakami-Arakaki, Oshiro, & Farran, 1988).

*Lots of modeling writing.* Because of the prevalence of this setting within early childhood classrooms, teacher preparation programs and professional development promoting awareness of best practices may be more readily available to educators (Hindman & Wasik, 2012). A salient best practice is that teachers ought to write their morning message along with children, explicating how print is used to communicate a message (Cabell, Tortorelli, & Gerde, 2013). This would allow teachers to use such writing supports as: print conventions and directionality. Teachers in this study modeled writing for young children during Morning Message, especially directionality.

*Emphasis on directionality.* Teachers’ support for directionality was primarily offered through modeling during morning message. However, teachers did not explicitly identify directionality of print, perhaps indicating teachers were less inclined to think aloud to support directionality of print, such as “*We need to leave a space and start a new word.*” The lack of identifying through thinking aloud (e.g., “*I’m going to start my message on the left side*”) or other explanations may be because of the arbitrary and straightforward nature of directionality. We start writing at the left because it is a rule of standard English print. There is no further connection to writing’s purpose or audience. Additionally, this modeling may be sufficient. For example, leaving spaces between words may be straightforward and relatively simple, such that when teachers repeatedly demonstrate and identify words through implicit modeling, children may incrementally develop awareness of print directionality. Research has shown that these implicit
experiences with print can be sufficient in developing its subsequent Concepts of Print awareness (Molfese et al., 2006).

**Emphasis on idea generation.** Lastly, teachers were supporting idea generation (e.g., brainstorming), but to this end, they primarily modeled their own idea generation process, excluding children’s engagement within the writing process. This finding dovetails with the results that teachers rarely targeted other pragmatic/discourse skills during morning message or offered abstract supports for brainstorming that would connect or ask children to connect to prior experiences in order to generate a message. In fact, we found only three teachers who elicited children’s connection to generate an idea to write for the morning message, such as “What are some things you like about Autumn that we could put in our message?” (PB-Q-CON). Teachers may benefit from strategies to engage children in the writing of the message so that teachers can support processes during writing as well as before.

**Considerable conversation about letters, sounds, and print conventions.** Additionally, teachers may also benefit from more diverse strategy training to support the Alphabetic Principle, specifically challenging children beyond the level of identification. We found that only three teachers used a connection support for letter-sound correspondence. No abstract supports were used for letter knowledge or formation. The lack of abstract supports for the Alphabetic Principle skills during writing is in conjunction with past research indicating that teachers rarely employ inquiry or exploratory strategies. Rather, parents (Bindman, Skibbe, Hindman, Aram, & Morrison, 2014) and teachers (Bingham et al., 2017) generally seem to identify and show letters during writing activities.
However, teachers provided and encouraged more explanations of Print Convention skills. There were 8 teachers who supported print conventions at the level of explanations or eliciting explanations of children, and these supports were used with more frequency relative to letter-sound connection supports. The use of and higher frequency of explanations used to develop print conventions may be because they are less challenging to understand, and fundamentally less abstract, than skills related to the Alphabetic Principle, given that print conventions do not involve manipulating language (Molfese et al., 2006). Therefore, teachers may have felt children were at a level permitting explanations and examples to further connect child identification to purpose of writing (e.g., We use a capital letter to show we are starting a new sentence.) In contrast, many children in preschool and kindergarten are still grappling with letter identification and struggle to conceptualize that letters make up basic units of sounds (i.e., phonemes) heard in words (Adams, Foorman, Lundberg, & Beeler, 1998). As result, teachers’ level of support for Alphabetic Principle skills may be more direct and on the level of identification.

*Some emphasis on vocabulary.* There was evidence that teachers did connect the message to unit concepts and, as a result, were, integrating vocabulary words to some degree within the message. The prevalence of vocabulary throughout morning message instruction may reflect the influence of recent initiatives and interventions dedicated to shoring up early child vocabulary skills, such that teachers may have had more teacher training or professional development opportunities in best practices related to early vocabulary development. Alternatively, it may reflect teachers’ commitment to planning within a unit-based framework; in other words, teachers may take very seriously the
theme they have committed to and work hard to integrate key concepts throughout their instruction. However, it was not apparent that teachers provided children with the definitions or explanations of words during Morning Message. Instead, these words were used largely as mechanisms for communicating about code-related information. This work is consistent with other evidence in the field that explicit vocabulary is rarely salient in classrooms (Cunningham & Stanovich, 1991).

Small Group Writing: Increased Language Supports Due to Composing

Interestingly, we did find substantially more language supports, specifically related to pragmatics/discourse, during small group writing than morning message. Contrary to past research showing very little composing in prekindergarten classrooms (Gerde et al., 2015; Bingham et al., 2017), the majority of teachers who used a writing activity in small group used a composing context (11 out of 15). This greater emphasis on composing in these classrooms may have emerged because first, the curriculum intertwined daily journal writing about unit concepts. Teachers using composing during small group were mainly having children write in journals about a topic pertaining to unit concepts, such as siblings or favorite things about the Fall. Observations seemed to indicate that children had a daily journal where they wrote in response to a unit concept. Secondly, small group settings may have been a good context for teacher support. Small group is an opportunity to help children with tasks that they may not be able to complete on their own. Because children need so much guidance during writing tasks, teachers in this study may have chosen to videotape their journal writing, in particularly, as a way to showcase their engagement with children to accomplish this task. Thus, we were able to see more precisely what composing looked like in early childhood classrooms and how
teachers were supporting it. Specifically, in this research, teachers in small group writing settings allowed children to incorporate both words and pictures to express their thoughts. Notably, teachers’ small group writing instruction targeted child pragmatics/discourse awareness through topic-attention focus and elaboration supports happening through feedback loops with children.

*Words and pictures accepted as children’s compositions.* Increased pragmatics/discourse supports revealed rich language interactions during composing tasks in small groups (Dyson, 2013; Rowe, 2008). This was mainly happening through journal writing whereby children were writing about a topic related to unit concepts in a personal way. For example, we observed children writing about siblings in their family, what they like to do with their grandparents, their favorite animal in the zoo, etc.

Noticeable, composing consisted of pictures and words as children’s valid written expression, thus providing opportunities for richer language exchanges, as evidenced by the amount of teachers attuning child attention to a topic and its clarification, along with elaboration of language (Snow & Ninio, 1996).

For instance, teachers were observed asking children to explain/read their written product, a product which included children’s drawings and attempted spellings to label because children at this stage in development cannot yet write a full sentence on their own (Kaderavek et al., 2009). Therefore, children had to engage in feedback loops with the teacher to create their message, which was generally of a personal nature (e.g., “What do you do with your grandparents?”). Teachers responding to children’s communicative attempts to scaffold language development is termed “responsive” interactions (Girolametto & Weitzman, 2002). Responsive interactions with adults have positive
linguistic and, consequently, cognitive outcomes for young children (Dickinson et al. 2010; Rosenthal Rollins & Snow, 1998). Children’s awareness and uses of language features develop as a consequence of meaningful interactions (Ninio & Snow, 1996). In this way, composing may have created a motivating context for the child to attend to linguistic cues whereby joint attention to language uses (teacher responsive interactions with child to create meaning) can help a child refine language to communicate. (Snow, 1986; Snow & Nino, 1996). Early composing as opposed to isolated skill instruction accepts child writing at any stage of development including scribbles, pictures along with letters and/or attempted spellings as children increase in their writing competency. The result is that acceptance of early composing allows children to create more complex texts at an earlier age (Mackenzie & Veresov, 2013; Peterson, McIntyre, & Forsyth, 2016) and, thus, allows teachers opportunities to support other skills and processes related to writing, specifically language skills related to child translation.

Attention to and Elaboration of Topic. Teachers supported children’s Attention and Clarification to topic more so than any other skill component of early writing during small groups, such as, “If mom is not a sibling, you shouldn’t be writing about her because we are supposed to be writing about our favorite thing to do with a sibling.” Sometimes the children would get lost in the writing and forget what the initial topic to be expressed was. The interactional process captured in this research showed that teachers were pulling children’s attention to and refinement of topic and this process has direct implications to self-regulating behaviors (Berninger et al., 2002; Kim et al., 2011; Limpo & Alverez, 2018; Zimmerman, 2001).
Self-regulatory processes, simply, are important to writing because it helps children switch between transcription (i.e., handwriting and spelling) and translation (i.e., word, sentence, discourse) while maintaining focus on topic and organizing ideas related to a topic. Considering writing’s demand to orchestrate many processes simultaneously, attention and executive functions that allow for self-regulation are a necessary component of writing (Berninger et al., 2017; Kim et al., 2011; Santangelo, Harris, & Graham, 2017). Recently, Berninger, Abbot, and Cook (2017) found that focused attention and self-monitoring, specifically linked to language processing only (i.e., as opposed to general attentional measures), predicted multi-level composite scores associated with the writing system (i.e., alphabetic subword/word spelling/syntactic construction). What this shows, the authors contend, is that attention to language and attention to writing work in concert in that children’s ability to enter and engage in classroom conversations affects early language component skills related to writing. Children will need to pull from their linguistic resources vocabulary and syntactic structures under the constraints of the written assignment (Fayol, 2017). Thus, conversations that bolster these linguistic resources (i.e., child attention to language features in the act of communication) are an integral part of early writing development because children learn language through using language (Tolchinsky, 2017).

Competency with language will have direct implications for the cognitive-linguistic switching involved with translating thought to print (Nagy and Stahl, 2006). Child translation processes involve the interaction of the internal mind, or cognitive representations, with the multileveled language system (e.g. subword, word, syntax,
discourse/text), and this happens indirectly through executive functions involved in the bidirectional cognitive-language translation (James, Jao, & Berninger, 2017).

Essential to the translating process is the intent to communicate. So too, teachers use of elaborating supports help to redirect children’s attention in ways to revise to provide more details to an absent audience. Although elaboration was less prominent, teachers using elaboration supports during writing were helping children to generate ideas to revise and switch to converting ideas to text during writing. This research seems to show that early composing, whereby children draw along with written words to communicate a message, can tap into regulatory processes related to cognitive-linguistic switching (Fayol, 2012), which may have strong effects for children’s language and literacy skills and, consequently, later academic success.

**Brainstorming.** Additionally, unlike in morning message where teachers were just modeling their own generation of ideas before writing, teachers asked for identification but also used abstract supports, such as connect to past learning and personal experiences so that children could generate their own topics. Again this was probably due to the fact that children were composing at their developmental level during journal writing. For example, we found teachers saying, “*We read yesterday that Carlos likes to go fishing with his grandfather, so you are thinking about something you like to do with your grandfather,*” to help children begin to generate ideas for their own composition. Teachers may need to see how to do this in a whole class setting such as morning message. Although small group revealed teachers supporting pragmatics/discourse through helping children brainstorm their own messages, similar to morning message, we did not find any interactive writing.
Interactive writing. Interactive writing is when teachers “share the pen” with children (Hall, Toland, Grisham-Brown, and Graham, 2014). The idea is that teachers and children work collaboratively to construct a unified text. In this way, interactive writing is a unique way to foster child awareness of skills related to child translation in that the teacher guides children to use language while maintaining focus on the overarching topic and purpose of the text. Interactive writing with children would help support component skills of translation (i.e., vocabulary, syntax, and pragmatics/discourse), but teachers may not be familiar or comfortable with this practice and, thus, may not be why we did not observe any interactive writing during instruction. Considering that many state standards have adopted an increased focus on language and writing as early as kindergarten, supporting skills related to translation may be an area of focus that could be beneficial to early childhood teachers.

Noticeable Absent Supports from both Morning Message and Small Group

Genre development

A salient concern was teachers’ lack of support for genre development. A growing body of research has substantiated relations between children’s genre knowledge and their subsequent reading and writing abilities within a genre (Kadervek et al., 2009; Pinto, Tarchi, Bigozzi, 2016). In other words, building up an awareness of inherent structures, or schemata, helps children to be able to read and write within a particular genre in that it fosters understanding expectations. The constraints of genre expectations guide children in their thought processes. Genre awareness helps children to understand expectations of a discourse so that in reading those texts children can understand underlying meanings, and in writing children can use features of text to communicate
within the guidelines and expectations of a specific genre (Kaderavek et al., 2009). Fluent retrieval of genre schemata eases cognitive load, allowing for greater ease in the cognitively demanding translation process (Fayol, 2017).

Teachers might find that narrative is a particularly important genre to explain and foster writing around. Children’s early narrative ability (e.g., personal narrative accounts and story-telling) has been studied in early childhood, and narratives are especially important for young children. Stories are an integral part of human expression, used to transmit knowledge, ideas, and cultural values (Chetaham & Jimenez-Silva, 2017). Children hear and use stories in ways to make sense of their surrounding world (Roth, 2009). Oral narratives, as a result, are thought to be a good bridge between oral conversational style and more literate language style.

Narratives, unlike conversations, require a certain amount of perspective taking (McCabe & Peterson, 1991) and in this way, require a greater reliance on linguistic structures to become a narrator establishing a “there and then” for an absent audience. The language is more decontextualized, as a result, and mirrors the type of school language children will encounter in their formal schooling (Snow, 1983). The nature of oral narratives, thus, involves attention and coordination between global aspects of story grammar and more micro-level linguistic features because of the level of intention involved in producing a unified text (Halliday, 2004). Put differently, children must rely heavily on their language skills (e.g., syntax, vocabulary) when crafting a narrative (Halliday & Hasan, 1976). Supporting child narrative development during writing activities in early childhood classrooms can help young children build the schema of
narrative texts, but also it can optimally engage children in the process of using language to learn language uses associated with school.

That said, while narratives may be a good springboard into more sophisticated discourse for young children, expository discourse is also associated with its own inherent structure and linguistic features aligning to expectations that so too must be coordinated in the production of a unified whole both orally and in print. Although receiving less attention than narratives, recent research has given more attention to expository texts and adult-child interactions in early childhood classrooms. Similar to narratives, the talk surrounding informational texts is often decontextualized. For example, Moschovaki and Meadows (2005) found that expository texts elicited more explanatory and personal experience comments during interactions, whereas narrative texts elicited more predictions.

Expository discourse entails attention toward a main idea and elaborating details to explain. Personal experiences may be ways children can generate those supporting details as they interconnect their past experiences with new content. Expository discourse, likewise, requires the sophisticated coordination of organized structure and organized language to achieve a purpose. The overarching purpose is guided by the rules of genre.

Taken together, genre awareness is important to literacy development. Further, explicitly teaching children genre is suggested (Cheatman & Jimenez-Silva, 2017; Graham & Sandmel, 2012; Rose, 2017; Roth, 2004;) so that (a) children can practice and receive feedback to increase in their complexity and their understanding of task, and (b) children who may lack representations of school text structures, including children from
diverse linguistic backgrounds, may be made aware of teacher expectations so that they can engage in classroom activities.

However, results of this research show that teachers were not supporting genre awareness. The reason may be twofold. First, it is likely teachers may be using book reading, rather than writing, as a context to address such things as plot or main idea and details. Research suggests that teachers are more aware of best practices associated with book-reading; however, teachers are less knowledgeable about the benefits of writing instruction or how to provide meaningful writing contexts that would address early literacy development (Hindman & Wasik, 2008). Teachers who are uncertain about how to teach different genres of writing or see genre as a part of reading and as secondary in writing may provide less opportunities that focus on genre awareness during writing instruction.

**Syntax**

Next, teachers gave only one support to syntax development, which was rather implicit and unintentional. As a foundational oral language skill consistently implicated in later literacy ability (Kim et al., 2016), the neglect of syntax supports is disconcerting. Language is a multidimensional construct, and differing language dimensions are interrelated, such that development in one can support development in the other. Recent research specific to child syntax knowledge has shown its relation to language processing, executive functions/attention, and to vocabulary development (Berninger et al., 2017; Drijbooms, Groen, & Verhoeven, 2017; Gamez et al., 2017; Levine et al., 2018; White, Alexander, & Greenfield, 2017). For example, Levine et al. (2018) found that syntax knowledge and language processing, in particularly, shared a unique
relationship. The researchers found that of syntax and vocabulary, syntactic knowledge was a stronger correlate to language processing. The authors concluded that limitations in the processing ability of children from low income homes may be a by-product of children’s lack of exposure to syntactic constructions. Syntax knowledge is a linguistic resource children use to engage in conversations, setting foundations to read and write (Berninger et al., 2017; Phillips, 2014; Hudson, 2017). Additionally, syntactic constructions allow for recognizing dependency relations that may be related to cognitive development (Hudson, 2017). Put another way, as children progress through school, they increasingly must recognize hierarchical syntactic structures, such that one idea is embedded and depends upon another in a similar way that general cognition orchestrates (Hudson, 1992), which requires syntactic understanding (Fayol, 2012). Taken together, syntax development in early childhood is a vital oral language foundation that may be overlooked in early childhood classrooms.

The lack of direct targeting of syntax is most likely due to teachers’ lack of language training (Moats, 2009; Puranik et al., 2012). In other words, without awareness of the different structures available to expand and coordinate sentences (ideas), it can be challenging for teachers to intentionally model expansions especially during on-the-spot interactions with children. Teachers may benefit from professional development opportunities that specifically include supporting syntax development of young children during writing interactions. Providing teachers with more language knowledge training may be an important first step (Moats, 2009).
Lastly, although skills related to Alphabetic Principle were one of the most supported writing components across instructional contexts, between letter knowledge, letter-sound correspondence, and letter formation, letter formation supports were relatively scarce.

Interestingly, combining both morning message and small group totals, letter formation was one of the least supported skills during writing instruction, accounting for only 6% of all supports observed across the two settings. This was a concern Puranik et al. (2014) also found, reporting that on average only 1 min. of instruction time was allotted to handwriting across the kindergarten school day.

Handwriting is an important early writing component in that it directly coordinates hand-eye-language processes, the effect of which can offer children a higher level of analysis for letters and letter-sound correspondences (Ehri, 2000). Put a different way, writing may be a stronger route to early reading. For example, neuroscientific evidence shows that letter processing has a neural connection to motor processes (Berninger et al., 2014). When children are engaged in writing letters rather than seeing or hearing these letters, there is greater activation in the area of the brain associated with visual letter/word form (i.e., left fusiform gyrus) (Berninger et al., 2014; James et al., 2017). In fact, children who had letters visually and orally pointed out to them had baseline levels of activation. In other words, this area of the brain acted as if the letters were not learned (James et al., 2017).

What this means is that writing letters recruits the letter/reading processing network more than does seeing/hearing letter names. Other intervention research has
shown greater growth in early literacy skills, such as letter and letter sound correspondence knowledge, when children are engaged in writing relative to other contexts, including book reading (Aram & Biron, 2004; Berninger et al., 2002; Puranik & AOlaiter, 2012; Senechal et al., 2004). It may be, for example, that writing letters provides a level of engagement that imprints letters more so to memory than simply seeing the teacher say and point to letters, yet in this research teachers tended to support letter and letter-sound correspondence in the latter way.

The lack of letter formation supports may have something to do with the increase in reliance on computers to write within schools. Teachers in early childhood classrooms may believe handwriting is an obsolete practice instead of seeing letter formation opportunities as exploratory engagement to foster skills of the alphabetic principle. Additionally, teachers may also believe that reading skills develop first and writing is an offshoot of early reading skills. Contrary to this belief is the new evidence supporting the opposite, that in fact writing may be a route to reading (Berninger et al. 2014, James et al., 2017; Graham et al., 2011). Teachers need to embed letter formation within meaningful activities for children across the school day (Puranik, & AlOtaiba, 2012; Santangelo & Graham, 2016). The results of this research show that teachers may benefit from PD addressing best practices to incorporate meaningful handwriting activities within different classroom contexts, such as during morning message, free play, etc.

Predictors of Writing Instruction: CLASS and Language-Based and Different Types of Supports

CLASS uniquely predicted the proportion of language-based supports and diversity in skill type supports teachers used during writing instruction. These two
measures of writing quality, specifically, tap into teachers’ embedding language, related to translation (i.e., vocabulary, syntax, pragmatics) and code-based skills related to transcription (i.e., concepts of print, alphabetic principle and sight word identification) simultaneously during composing tasks. Research has substantiated greater child writing growth when language and code-based skills are targeted in meaningful activities (Berninger et al., 2002). The expression of ideas for children can bring meaningful analysis of code-based skills, providing beneficial effects to language and literacy growth (Aram & Biron, 2004; Senechal et al., 2012). Therefore, similar to the attention that book reading has received as an optimal context to support child language and literacy growth, we believe that early composing activities can also be important opportunities for teachers’ to increase the quality of their interactions with children; therefore, early composing should be a focus in early childhood classrooms similar to book reading, as evidenced by its unique relationship with overall quality instruction.

Teachers’ Complex Syntax and Abstract Supports

Lastly, the complexity level of teacher syntax uniquely predicted teachers’ abstract supports (i.e., application, connection, explanations) accounting for background and control variables in the model, but CLASS did not. This is an interesting find in that it may support two things. First, certain types of talk may require certain linguistic features. For example, questions usually contain nominal clauses (e.g., What do you think will happen?) and are associated with mental verbs (e.g., think, know). Abstract supports in this study reflected to a degree the teacher requiring children’s distancing from the immediate context. For example, explaining the function of question marks and why writers use them requires an amount of abstract connecting of immediate observed
knowledge to a distanced context. In this way, the complexity of the thinking may be intricately linked to the complexity of the language (Justice, Jiang, & Strausser, 2018; Vasilyeva & Fernald, 2012), supporting notions of functional linguistics (Gaux & Gombert, 1999; Halliday, 1994).

Additionally, some teachers may hold high expectations for children and, thus, more so challenge students at a conceptually higher level, whereas others may leverage challenging students in favor of child self-confidence. Further still, some early childhood teachers may think that young children are not capable of the type of distanced thinking involved in our defined abstract supports (Rowe, 2012). However, because this study did not include a measure of teacher beliefs, more research is needed to draw any conclusions about teacher beliefs and complex features of teacher talk.

In further exploring teachers challenging talk and challenging syntax use, we disaggregated abstract into its three observed types in this study (i.e., application, connection, and explanations). While teachers’ connection and explanations yielded the same results as the aggregated model, application supports did not. Teachers level of complex syntax did not predict application supports. It may be that because most application supports also included sight word identification, teachers did not have to use more complex syntax to have children apply a sight word, which is usually devoid of conceptual knowledge (e.g., the). For example, a teacher may say: “Use ‘the’ in your own sentence for me”. Another reason may be because teachers were asking children apply a concept for vocabulary by relating it to another concept, such as “Is apple a healthy or unhealthy food?” Although in this case the child has to apply what she knows about the vocabulary word healthy to an easier concept of “apply” to decide if apply should be
classified as healthy or unhealthy, to ask the child to apply did not require higher level syntax to do so relative to when teachers make connections or provide explanations, such as, “An apple picker is used so that farmers can reach high up and grab apples because trees are high, right.” Another example of explanations that relate to code based skills would be, “I need to put a question mark here because I am asking for an answer.” Considering abstract supports of code-related skills, it may be that CLASS did not predict abstract supports but complex syntax did because CLASS may not be designed to capture quality code-based interactions. It may be CLASS’s intent to gauge quality interactions, (i.e., language exchanges) may overlook teachers’ more abstract support of code-based skills.

Further research should look into differing types of so called challenging talk with children in order to untangle which specific supports are beneficial to child language and literacy growth for child writing development.

Limitations and Future Directions

This study is limited to its sample size. We could only take a subsample of the larger 33 teacher sample because not all teachers chose to focus on writing during their small group instruction. With only 15 teachers, it is more problematic to generalize results. Also, teachers were drawn from two cities in the nation.

Further still, we were unable to compare prekindergarten and kindergarten teachers’ writing supports from Fall to Spring, or compare measures of child language and literacy growth. Further research should explore dimensions of teacher writing supports and their relation to child literacy and language growth. For example, past research has shown that code-based focused instruction relates to higher gains in code-
based skills, and language and conceptual understanding focused instruction relates to
growth in language based skills, typically vocabulary (Connor, Morrison, & Slominky,
2006; Hindman & Wasik, 2008). Further research may test if proportion of language-
based supports relate only to language growth, or if, as early writing research suggests,
tying in language to early literacy skills in unison, may provide children a meaningful
context to connect early literacy skills that boost child growth in both literacy and
language. Research should test which writing quality dimensions contribute unique
variance to multiple measures of child language and literacy growth.

Additionally, our research is unclear how often teachers’ may be supporting
writing skills. Although morning message is a relatively established instructional context
in early childhood settings, teachers’ generally may not be using writing during small
group. Past observational research has shown that teachers rarely support child writing
during the instructional day (Gerde et al., 2015; Puranik et al., 2014). In fact, the majority
of writing in early childhood classrooms seems to be children initiating their own writing
experiences without any teacher support. The purpose of this research was to observe
teachers’ during writing instructional contexts to capture what skills were a focus and
how were those focus skills being supported, but we cannot speculate as to teachers’
general frequency of the observed writing supports during the school day. Further,
because teachers in our sample choose to focus on writing, they may not be a
representative sample of typical early childhood teachers.

Last, we were not able to capture other parts of teachers’ whole-class instruction,
which may have included handwriting instruction. For example, teachers may have used
other times of the day, such as Circle Time, to teach letter formation.
Conclusion

This research revealed that language is integral for children’s writing development, and that a meaningful context is one where children experience writing as a communicative context. To communicate within school, certain school language features of discourse need to be underscored, especially for children coming from low SES homes that start out at a school language disadvantage despite possessing a rich home language (Delpit, 1995). Composing for young children can be an important activity for low SES children, in particularly, because of the opportunity to use multiple skills in meaningful ways. It is vital to help teachers use early composing in ways to support child language and emergent literacy skills. This research shows composing can be a powerful context to support rich language interactions.

Teachers did a lot of modeling of how to write connected with developing Concepts of Print and modeled initial idea generation to compose a message. Additionally, teachers focused on child skills related to the Alphabetic Principle. Overall, however, there were less writing component supports related to child translation (i.e., Vocabulary, Syntax, and Pragmatics/Discourse) with noticeably near exclusions of Syntax and genre awareness supports. Lastly, an important writing skill related to child transcription (i.e., Alphabetic Principle, Concepts of Print) was scarce when compared to other transcription skills. Within the Alphabetic Principle component, letter formation supports were the least supported code-based skill related to child transcription.

Teachers need further training in supporting code-based skills within composing contexts so that children are able to make meaningful connections between early literacy skill learning and its purposes. Teachers also need training to support early child
translation skills so that children have more practice navigating between ideas and text.
Further training teachers in strategies such as Interactive Writing may prove beneficial in
helping teachers target child syntax knowledge and genre awareness, in particularly.

In conclusion, early writing as a communicative context can be a challenging
experience for young children which may provide benefits to child language and literacy
learning, contributing to later academic achievement. This research found that teachers
were supporting both early language and literacy skills simultaneously during composing
tasks. Further these language skills are in alignment with translation skills as purported
by the Simple Views of writing. However, teachers may need more training in using
composing to foster early literacy and language skills. Similar to the attention book
reading has received as being a special context, early composing needs attention as a
special context in early childhood classrooms. Including composing as an important
instructional context can help provide children multiple opportunities to grow as learners.
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APPENDIX A

COMPONENTS AND SUBCATEGORIES OF EARLY WRITING

*Early Writing Component: Code-Based*

<table>
<thead>
<tr>
<th>Code-Based Component</th>
<th>Sub-Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concepts of Print</td>
<td>Print Conventions</td>
</tr>
<tr>
<td>Alphabetic Principle</td>
<td>Letter Knowledge</td>
</tr>
<tr>
<td>Semantics</td>
<td>Sight Word Recognition</td>
</tr>
<tr>
<td></td>
<td>Directionality</td>
</tr>
<tr>
<td></td>
<td>Letter-Sound Correspondence</td>
</tr>
<tr>
<td></td>
<td>Letter Formation</td>
</tr>
</tbody>
</table>

*Early Writing Component: Language-Based*

<table>
<thead>
<tr>
<th>Language-Based Component</th>
<th>Sub-Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary</td>
<td></td>
</tr>
<tr>
<td>Syntax</td>
<td></td>
</tr>
<tr>
<td>Pragmatic/ Discourse</td>
<td>Brainstorming</td>
</tr>
<tr>
<td></td>
<td>Attention to Topic</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
</tr>
<tr>
<td></td>
<td>Genre Development</td>
</tr>
</tbody>
</table>
### APPENDIX B

**CODES OF TEACHER WRITING SUPPORTS FOR CONCEPTS OF PRINT**

*Concepts of Print Codes*

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
</table>
| (Print Conventions) PC-C-ID | Teacher points out/ identifies print conventions | “This is a period.”
|            |                                                      | “I’ll put my question mark right here.”
|            |                                                      | “Now I need a period.”                                                  |
| PC-Q-ID    | Teacher asks for identification of print conventions | “What do we call this?”
|            |                                                      | “Where do we see the period in this sentence?”
|            |                                                      | “Come up and circle the question mark.”                                 |
| *PC-C-EX   | Teacher explains the function of print conventions   | “A period tells the reader to stop.”
|            |                                                      | “We always have to let the reader know when we are finished our thought.”
|            |                                                      | “So when we are writing, all thoughts or sentences need to end with punctuation mark.” |
| *PC-Q-EX   | Teachers asks children to explain/display functions of print conventions | “Give me a sentence that would need a question mark at the end?”
<p>|            |                                                      | “Why do I need to put a question mark here?”                            |</p>
<table>
<thead>
<tr>
<th>(Directionality)</th>
<th>Teacher writes as children watch</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Writes</td>
<td>Teacher reads and points at written words as children watch</td>
</tr>
<tr>
<td>D-Points to Words</td>
<td>Teacher reads and points to written words as children repeat read with teacher</td>
</tr>
<tr>
<td>D-Teacher Points/ Child Reads</td>
<td>Teacher reads and points to written words as children repeat read with teacher</td>
</tr>
<tr>
<td>D-C-ID</td>
<td>Teacher points out/ identifies directionality of print</td>
</tr>
<tr>
<td></td>
<td>“I start my message of the left side.”</td>
</tr>
<tr>
<td></td>
<td>“No space, no problem, we start back at the left.”</td>
</tr>
<tr>
<td>D-Q-ID</td>
<td>Teacher asks children to identify directionality of print</td>
</tr>
<tr>
<td></td>
<td>“Where do we start to write?”</td>
</tr>
<tr>
<td></td>
<td>“Where should I write my next word?”</td>
</tr>
<tr>
<td>*D-C-EX</td>
<td>Teacher explains functions of directionality</td>
</tr>
<tr>
<td></td>
<td>“We have to leave spaces between words, so the audience knows we are moving onto the next word.”</td>
</tr>
<tr>
<td>*D-Q-EX</td>
<td>Teacher asks children to explain functions of print directionality</td>
</tr>
<tr>
<td></td>
<td>“Why do I need to leave space?”</td>
</tr>
</tbody>
</table>

*Note. *indicates abstract support
# APPENDIX C

**CODES OF TEACHER WRITING SUPPORTS FOR ALPHABETIC PRINCIPLE**

*Alphabetic Principle Codes*

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Letter Knowledge) LK-C-ID</td>
<td>Teacher points out/ identifies letter knowledge</td>
<td>“Look at the letter r”</td>
</tr>
<tr>
<td>LK-POINT-ID</td>
<td>Teacher uses a gesture to visually point out sight letter for child</td>
<td>“This/ That is the letter s.” (points to the letter)</td>
</tr>
<tr>
<td>LK-Q-ID</td>
<td>Teacher asks for identification of letter knowledge</td>
<td>“What letter is this?”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Is that the letter r or s?”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Who can come up and circle the letter r?”</td>
</tr>
<tr>
<td>*LK-C-CON</td>
<td>Teacher connects letters to words not currently displayed</td>
<td>“There are three students in here who’s name begins with the letter s.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Leaves in the fall from our unit has one of our letters of the week in it.”</td>
</tr>
<tr>
<td>*LK-Q-CON</td>
<td>Teachers asks children to connect letters not currently displayed</td>
<td>“What other word do you know that begins with the letter s?”</td>
</tr>
<tr>
<td>(Letter-Sound Correspondence)</td>
<td>LS-C-ID</td>
<td>Teacher identifies/points out letter-sound correspondence</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>LS-Q-ID</td>
<td>Teacher asks children to identify letter-sound correspondence</td>
<td>“What sound does m make?” “Circle the letter that makes the /s/ sound?” “What is the long vowel sound of a?”</td>
</tr>
<tr>
<td>*LS-Q-CON</td>
<td>Teacher asks children to connect letter-sound correspondence to a word not currently displayed</td>
<td>“What other can you think of has the long a sound?” “What other word begins with the /b/ sound?”</td>
</tr>
<tr>
<td>(Letter Formation)</td>
<td>LF-MODEL</td>
<td>Teacher models letter formation</td>
</tr>
<tr>
<td>LF-PHYS</td>
<td>Teacher physically supports child writing</td>
<td>Teacher uses hand over hand to help child form letter</td>
</tr>
<tr>
<td>LF-C-ID</td>
<td>Teacher identifies/explains directionality of letters</td>
<td>“You start at the top line and slant down.” “Lowercase p cuts the bottom line.” “Look at the line in this p.”</td>
</tr>
<tr>
<td><strong>LF-Q-ID</strong></td>
<td>Teacher asks for letter formation identification</td>
<td>“Show me how to write the letter p.”</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Who can come up and write the letter p in our message?”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Now you write the letter w.”</td>
</tr>
</tbody>
</table>

*Note. *indicates abstract support
## APPENDIX D

### CODES OF TEACHER WRITING SUPPORTS FOR SEMANTICS/VOCABULARY

#### Semantics/Vocabulary Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
</table>
| **(Sight Word)** SW-C-ID | Teacher points out/ identifies sight words | “We are going to find an in our message.”  
“\textit{The} is one of our sight words.” |
| **SW-POINT-ID** | Teacher uses a gesture to visually point out sight word for child | Teacher points to visual of sight word.  
“Look at the word wall.” |
| **SW-Q-ID** | Teacher asks for identification of sight words | “Who can come up and circle one of our sight words?”  
“What word is that?” |
<p>| <em>SW-C-EX</em> | Teacher uses example to show function of sight word | “An example of the in a sentence would be, “I went to the store.” |
| <em>SW-Q-APPLY</em> | Teachers asks children to use sight word beyond the immediate context | “Now give me a sentence using the word the.” |
| <strong>(Vocabulary)</strong> V-C-ID | Teacher points out/ identifies vocabulary words | “I am going to use one of our vocabulary words in the message.” |</p>
<table>
<thead>
<tr>
<th><strong>V-Q-ID</strong></th>
<th>Teacher asks children to identify vocabulary words</th>
<th>“I’m going to write about my sibling.”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“Siblings are your what?”</td>
<td>“Where did I use one of our vocabulary words in the message?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>V-C-EX</strong></th>
<th>Teacher explicitly defines or gives examples of sophisticated vocabulary or unit concepts</th>
<th>“Interact means to do things together.”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“Families a lot of time have special ways to spend time with each other.”</td>
<td>“Leaves turn different colors when they lose their chlorophyll.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>V-Q-APPLY</strong></th>
<th>Teacher asks children to apply meaning of vocabulary words</th>
<th>“If the leaves were all different colors, would they still have chlorophyll?”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>“Would this be (picture of an apple) a healthy or unhealthy food?”</td>
</tr>
</tbody>
</table>

**Note.** *indicates abstract support
### Pragmatic/ Discourse Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Brainstorming)</td>
<td>Teacher models identifying topic before writing</td>
<td>“So, I want to write about the Fall.”</td>
</tr>
<tr>
<td>PB-MODEL</td>
<td></td>
<td>“We are going to write some things about pumpkins in our morning message.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Maybe you want to write about pumpkins in your journal.”</td>
</tr>
<tr>
<td>*PB-C-CON</td>
<td>Teacher connects topic to past experiences to generate ideas</td>
<td>“We know that the leaves change during the Fall.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“In our book we read all about pumpkins.”</td>
</tr>
<tr>
<td>*PB-Q-CON</td>
<td>Teacher asks children to connect topic to past experiences to generate ideas</td>
<td>“What else did we learn about pumpkins?”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“What do you like to do with your family?”</td>
</tr>
<tr>
<td>(Attentional Directing) PA-C-ID</td>
<td>Teacher reminds child of and clarifies topic during writing to help child revise</td>
<td>“You are supposed to be writing about your grandparent.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“That wasn’t what you were supposed to do.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Remember we are writing about our siblings.”</td>
</tr>
</tbody>
</table>
| **PA-Q-ID** | Teacher asks child to identify topic | “What are you writing about?”  
“Is this your grandparent?”  
“Where’s your grandfather here?” |
| **PA-C-CON** | Teacher gives example to topic during writing | “So remember yesterday we read the story about the boy and his grandfather.”  
“I went to the movies with my sister because that’s something we enjoy together.” |
| (Elaboration)  
**PE-C-ID** | Teacher points out further details of topic during writing to revise | “If you are at the park you are outside.”  
“There can be more than just grass outside.”  
“A pumpkin’s in the pumpkin patch with a farmer.” |
| **PE-Q-ID** | Teacher asks children to identify further details of topic | “Can you add another pumpkin here?”  
“Where else are you cooking with your dad?” |
<table>
<thead>
<tr>
<th><strong>PE-Q-CON</strong></th>
<th>Teacher asks children to connect to past experiences in order to give further details of topic</th>
<th>“If you were at the playground, what else would you see?”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>“In our story yesterday, what did we find out about pumpkins that we could add here?”</td>
</tr>
<tr>
<td><strong>(Genre Development)</strong></td>
<td>Teacher identifies or asks for child identification of elements of genre</td>
<td>“What was the kickoff of our story?”</td>
</tr>
<tr>
<td><strong>PG</strong></td>
<td></td>
<td>“In a letter the person writing signs their name here.”</td>
</tr>
</tbody>
</table>

*Note.* *indicates abstract support
### APPENDIX F
### DESCRIPTIVES OF KEY VARIABLES

<table>
<thead>
<tr>
<th>Key Variable</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>S.D.</th>
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<tr>
<td>Pre-K Child Age in Months</td>
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