

LANGUAGE AND LITERACY SUPPORTS IN EARLY CHILDHOOD CLASSROOMS:  
COMPARING RATINGS OF TEACHERS AND OBSERVERS

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## ABSTRACT

A number of early literacy skills, including oral language skills, phonological awareness, alphabet knowledge, and print knowledge, have been identified as precursor skills to later literacy skills and outcomes. Previous research has documented that many early childhood educators lack adequate knowledge and skills to implement practices necessary to foster emergent language and literacy development. This research was conducted to examine early childhood educators' awareness of their classroom practices supporting language and literacy skills. A 48-item self-rating survey was created based upon dimensions measured by a widely used reliable and valid observation tool. The observation tool was used in 34 teachers' classrooms from 14 childcare centers. Observer ratings were then compared to teacher self-ratings. Significant differences existed between observer scores and participants' self-rating scores on the *Language and Literacy* subscale with large discrepancies in areas related to phonological awareness implementation, promoting vocabulary, consistently guiding the use of books for meaningful purposes, supporting children's emergent writing skills, and providing an appropriate writing environment. There were no significant correlations between observers' and teachers' ratings. Findings have important implications for further research to examine early childhood educators' awareness of their teaching practices and classroom environment in the areas of language and literacy. The value of teachers knowing areas in which they can improve is that they will be able to seek appropriate resources and help in those specific areas of need.

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CHAPTER I  
INTRODUCTION

**Emergent Literacy**

“Emergent literacy consists of the skills, knowledge, and attitudes that are presumed to be developmental precursors to conventional forms of reading and writing and the environments that support these developments” (Whitehurst & Lonigan, 1998, p. 849). A number of early literacy skills, including oral language skills, phonological awareness, alphabet knowledge, and print knowledge, have been identified as precursor skills to later literacy skills and outcomes (NELP, 2008; Snow, Burns, & Griffin, 1998; Whitehurst & Lonigan, 1998) and are highly predictive of later reading (Byrnes & Wasik, 2009). The early identification of difficulties related to reading is essential for effective remediation for young children (Fielding-Barnsley & Hay, 2012). For example, children with significant reading and learning difficulties often lack skills in phonological awareness and language (Hogan, Catts, & Little, 2005; Lyon, Shaywitz, & Shaywitz, 2003). Children who enter first grade without adequate levels of phonological processing skills will not benefit from formal reading instruction. Those children who show the highest phonological processing skills at age 3 or 4 become the best readers in first grade. Larger spoken vocabularies in first grade have also been found to correlate with higher reading achievement test scores (Byrnes & Wasik, 2009).

Measures of phonological awareness and letter identification in kindergarten have been identified as significant predictors of later reading success in second grade (Hogan et al., 2005).

In a longitudinal study, 570 children were assessed in kindergarten, second grade, and fourth grade on phonological awareness, letter identification, word reading, and phonetic decoding. Results indicated that a kindergarten measure of phonological awareness accounted for variance found in second-grade word reading above and beyond variance accounted for by letter identification. However, phonological awareness measured in kindergarten did not add predictive value to fourth-grade word reading beyond the prediction of second-grade word reading. Results also showed a significant relationship between second-grade word reading and fourth-grade phonological awareness. The authors suggest implications for the importance of assessing phonological awareness in kindergarten in order to predict future reading outcomes. After second-grade, word reading itself could be used as a predictor of future reading outcomes (Hogan et al., 2005).

Evidence suggests a causal and predictive relationship between phonological awareness and children's abilities to decode and spell and is a precursor to literacy development (Phillips, Clancy-Menchetti, & Lonigan, 2008). Phonological awareness is important for later reading success because it helps young children to understand smaller sounds (such as syllables and phonemes) in order to break the code of written language and comprehend the alphabetic principle. Appropriate instruction of emergent literacy skills is especially important for preschool children from at-risk backgrounds, as there is a gap in educational achievement between children who grow up in poverty and those who do not. Social class differences in early literacy skills are related to early language environment, vocabulary development, and general home literacy environment (Evans, Shaw, & Bell, 2000).

Given that phonological awareness is a significant predictor of later reading outcomes, identification and intervention of deficits in phonological awareness is crucial. Several

phonological based intervention programs have shown successful results in young children's current and later emergent literacy skills. In one program developed by Lundberg, Frost, and Petersen (1988), implemented only 20 minutes per day, activities such as nursery rhymes, investigation of word lengths, clapping and dancing to rhythms, and segmentation and blending of word phonemes were carried out with the class. When compared to a district of children who previously and frequently outscored the experimental group in academic measures, the children who participated in the experimental program were significantly superior in sensitivity rhymes, syllables, word length, and phonemes when tested at the end of the training program. When followed up with in first grade, the experimental group outperformed the control group in word recognition and spelling tests. When retested again in the second grade, the children who partook in the intervention program were maintained an advantage in skills related to preliteracy and reading (Lundberg et al., 1988).

Another program was implemented by Wasik and Bond (2001) and Wasik, Bond, and Hindman (2006). The program focused on interactive book reading, guiding conversations, phonemic awareness, alphabet knowledge, and writing in classrooms serving 3- to 5-year-olds from low-income families. Teachers were divided into control and intervention groups. The intervention group received materials and training modules related to book reading and oral language development strategies. Wasik et al. (2006) specifically included Head Start teachers and the intervention was conducted for 9 months while Wasik and Bond (2001) conducted the intervention over a 15-week period. All children were given pretest and posttest measures of expressive and receptive vocabulary (Wasik & Bond, 2001; Wasik et al., 2006) and alphabet knowledge (Wasik et al., 2006). Alphabet knowledge was not a main target of the intervention process so the authors used this measure as a way of confirming that intervention teachers were

not more skilled than control teachers. Children's posttest alphabet knowledge measures, controlling for pretest measures, were significantly higher in the control classrooms than the intervention classrooms. Children's pretest measures of receptive and expressive vocabulary were not significantly different between the control and intervention classrooms. In both studies, children in the intervention classrooms outperformed children who did not participate in the intervention on receptive and expressive vocabulary posttest measures (Wasik & Bond, 2001; Wasik et al., 2006).

Jackson et al. (2006) implemented a 15-week intervention program in 39 classrooms from state-funded early childhood programs serving children between the ages of 3- to 6-year-old. The intervention was designed to strengthen teachers' practices in order to improve children's language and literacy skills. The overall quality of the classroom and quality of language and literacy practices were examined in each classroom using two observation tools. Various child measures were used that examined children's vocabulary, language skills, and literacy skills. Teachers who participated in the intervention program improved significantly more than the control in measures of overall quality and quality of language and literacy practices. Children in classrooms whose teachers participated in the intervention program showed significantly higher gains on posttest measures (Jackson et al., 2006).

### **Quality of Instruction, the Classroom Environment, and Professional Development Programs**

“Several studies have found that well-designed teacher evaluation systems, aligned with professional learning and development, can contribute to improvements in the quality of teaching and raise student achievement” (Looney, 2011, p. 40). Teacher evaluation by way of observation, used in early childhood educational research for over thirty years, provides a way to measure and

indicate teachers' strengths and weaknesses and also serves to evaluate if professional development training is improving teacher performance. In early childhood education settings, observation evaluations examine not only the teachers' instructional practices but also emotional interactions between teachers and students and the classroom's environment and organization (Pianta & Hamre, 2009). With growing evidence showing the relationship between children's early literacy and language development and their later achievement of skilled reading, focus has turned to improve the quality of early education, especially in the areas of language and literacy instruction. In 2013, it was reported that over half of 3- and 4-year-olds participated in early education programs and the percent of children of attending these programs has grown since 2009 (The Annie E. Casey Foundation, 2013). Quality refers to classroom-level variables that likely affect children's development. Quality of childcare settings is mostly measured by observational ratings of the environment on a multitude of clearly defined dimensions that are suggested indicators of quality. Research on quality usually focuses on either the importance of early school years for later school success or it examines quality and the correlates of quality in early childhood settings.

A childcare environment is often the second most frequently encountered environment for young children, behind their home environment. The quality of the childcare environment is essential for enhancing school readiness and later school success. Peisner-Feinberg et al. (2001) found that children who attended preschool classrooms with higher quality practices had more advanced skills in receptive language ability, math ability, cognitive and attention skills, problem behaviors, and sociability as measured in kindergarten. Individual outcomes measured in second grade, including cognitive skills, attention skills, problem behaviors, and math skills, were still strongly influenced by earlier classroom practices during preschool. Closeness of the teacher-

student relationship, as rated by the teacher, strongly influenced later social skills (Peisner-Feinberg et al., 2001).

Previous studies have found tremendous variability in the types and quality of the preschool classroom environment and teacher instructional practices that children experience (Meyer, Wardrop, Hastings, & Linn, 1993; Pianta, La Paro, Payne, Cox, & Bradley, 2002). Across 223 kindergarten classrooms, the time children spent in various activities (teacher-directed, center, seat-work, transition, or free time) varied extensively where some children were observed to partake in teacher-directed activities 100% of the observation period while others were not observed to partake in teacher-directed activities at all. Children were read aloud to for only 7% of the observed time and 31.8% of the children were never read aloud to during the observations (Pianta et al., 2002). Higher rates of poverty in a school were significantly related to lower quality ratings of child-centered climates and instruction. A higher ratio of children to adults was related to lower quality of teacher positivity and instructional climate (Pianta et al., 2002).

In a sample of 135 publicly funded preschool classrooms serving 4-year-olds considered at-risk, the quality of language and literacy instruction was found to be low (Justice, Mashburn, Hamre, & Pianta, 2008). Procedural fidelity (if teachers carry out procedures accurately, efficiently, and appropriately) and quality of instruction (teacher's ability to work flexibly with students, create dynamic interactions, and respond sensitively to students) along with teacher and classroom characteristics were examined. Only 8% of the observed language lessons and 6% of the literacy lessons were rated in the high quality range. Very few participating teachers used strategies that promoted accelerated language development, such as asking open-ended questions, repeating and extending children's utterances, and modeling advanced vocabulary.

Similarly, few teachers provided explicit, systematic, and purposeful literacy instruction to children (Justice et al., 2008).

A study of 1129 children from 671 prekindergarten classrooms examined the relationship between quality of teacher-child interactions and teacher instructions with children's outcomes (Burchinal, Vandergrift, Pianta, & Mashburn, 2010). The study focused specifically on children from low-income households. Children's vocabulary, oral language, math skills, and problem solving abilities were assessed at the beginning and end of the school year. Measured teacher instructional quality was related to children's expressive language, reading, and math skills, showing that children in higher quality classrooms tended to score higher in those academic areas (Burchinal et al., 2010).

The Literacy Environment Enrichment Program (LEEP) was designed to assist teachers in improving the provided support for children's language and literacy development (Dickinson & Caswell, 2007). The program consisted of a 45-hour course delivered in two 3-day sessions that dealt with concepts such as emergent literacy, writing development, curriculum development, and conversations with children. Thirty teachers participated in the LEEP course over a 2-year period while 40 teachers were in the comparison group and did not participate in the LEEP course (but were equivalent in prior experience and overall classroom instructional skills). The *Early Language and Literacy Observation (ELLCO) Toolkit* and two subscales from the Assessment Profile (Abbott-Shim & Sibley, 1997) were used to assess the quality of the language and literacy environment of each classroom. Classrooms were observed once in the fall and once in the spring. After controlling for background variables and the fall observation score, teachers who participated in LEEP scored significantly higher than the control teachers as rated by observers in the spring. The most significant improvement from fall to spring was seen in

literacy-related practices including the Literacy Environment Checklist, and the Books and Writing subscales. Significant improvements were also seen in the Language, Literacy, and Curriculum subscales, which reflect teachers' instructional practices. Moderate changes were seen on the more global measures including the General Classroom Environment and Learning Environment subscale.

As cited in Dickinson and McCabe's review (2001), the influences of classroom experiences were examined in relation to children's language and literacy development. In 71 classrooms, children's receptive vocabulary and early literacy scores were measured along with classroom quality (as measured by the ELLCO) and children's background variables were controlled for. The ELLCO scores accounted for 80% of the between-classroom variance in children's vocabulary and 67% of between-classroom variance in children's early literacy scores. Children's fall to spring scores for receptive vocabulary were also examined to determine if teachers' participation in the LEEP course influenced children's scores. Some advantage was found for children in classrooms of teachers who were partaking in the LEEP course but longer-term follow-ups need to be conducted to look at long-term effects of teacher intervention on children's language and literacy development (as cited in Dickinson & McCabe, 2001).

Project REEL (Sandefur, Warren, & Gamble, 2011) examined the effects of a professional development program on 220 early childhood educators serving 3- and 4-year-olds. The program provided training, coaching, and materials to educators as support to promote children's social-emotional, language and literacy, and mathematical development. Teacher measures included self-ratings of the frequency and use of recommended practices, a checklist of recommended materials, quality of the language and literacy environment using the ELLCO, and a measure of specific strategies used that were taught during the program. Child measures



included language, literacy, numeracy, and social skills. At baseline, 29% of the educators received high quality ratings as measured by the ELLCO and by the end of the third year of the project, 86% had received a high quality rating. Educators improved their knowledge and skills across the 3-year period of training. Children showed significant improvements in most measures of language and literacy across the school year after controlling for age (Sandefur et al., 2011).

Cunningham (2010) investigated the relationship between quality of preschool classrooms and children's literacy development. Twenty-four teachers assessed their children's literacy skills. Each classroom was assessed based upon their global classroom environment, which examines space, furnishings, personal care routines, language and reasoning, activities, interaction, program structure, and parents and staff. The literacy and language environment was also assessed using the Early Language and Literacy Classroom Observation (ELLCO). A significant, positive correlation was found between the global quality and literacy quality (ELLCO) of the classroom environment. Results also indicated a moderately significant, positive relationship between the literacy environment and children's literacy development. With an increase in literacy environment quality, there was also an increase in children's literacy scores, indicating the positive impact that the literacy environment can have on children's literacy skills. Classrooms were also divided into three main quality categories based upon their ELLCO ratings: Deficient, Basic, and Exemplary. Significant differences in children's literacy scores were found between classrooms rated Deficient and Basic and between classrooms rated Deficient and Exemplary, with children scoring highest in classrooms rated Exemplary and lowest in classrooms rated Deficient. Overall, the classrooms examined provided only a basic support for children's literacy development based upon mean ELLCO ratings. Around two-thirds of the children in the classrooms examined scored at or below the 50<sup>th</sup> percentile for their literacy

skills. Only classrooms that were rated Exemplary contained the largest percent of children who scored above the 50<sup>th</sup> percentile (Cunningham, 2010).

Neuman and Roskos (1993) investigated the effects of literacy-enriched play settings on environment and functional print tasks in minority children raised in poverty. Three classrooms consisted of an office play setting and a parent-teacher to assist children during play (Group 1), three classrooms consisted of the office play setting while the parent-teacher strictly monitored and observed the play (Group 2), and two classrooms received no intervention and engaged in normal activities (Group 3). The office play setting included signs, labels, common functional office print objects, calendars, in/out trays, paper, pencils and other literacy focused items to encourage literacy interactions during play. All children were given the Test of Early Reading Ability before intervention and results indicated no significant differences. For the group with the office play setting and with assistance from a parent-teacher, the parent was encouraged to extend play by doing things such as taking an order, writing a prescription, making a list, etc. In the monitoring group, the parent was instructed to observe and takes notes on the quality of the play behavior but not directly play with the children. These settings were available to children 3 days per week for 5 months (Neuman & Roskos, 1993).

Prior to the intervention, literacy-focused activities were minimal for all groups of children. With the office play setting available, Groups 1 and 2 significantly increased their total percentage of time spent in literacy activities over the 5-month period. When tested on an environmental word reading task, Group 1 performed significantly higher than Groups 2 and 3. On a print-labeling task, Group 1 performed significantly higher than Group 3. Using environmental print in everyday activities is important in becoming an efficient, literate language

user. Providing a literacy-enriched setting in a preschool classroom further supports and encourages engagement in literacy activities (Neuman & Roskos, 1993).

Guo, Justice, Kaderavek, and McGinty (2012) also examined the effects of the literacy environment in relation to children's emergent literacy in preschool. The ELLCO was used to assess the physical literacy environment and the Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2008) was used to assess the psychological literacy environment in classrooms of 30 teachers. Children's emergent literacy skills were measured once at the beginning of the school year and again at the end. Results indicated that the quality of the literacy area (part of the physical literacy environment assessed by the ELLCO) significantly predicted children's gains in alphabet knowledge. The presence of writing materials was positively and significantly related to children's growth in alphabet knowledge and name-writing ability in the context of a classroom with high-quality instructional support (psychological literacy environment measured by CLASS). In classrooms with low-quality instructional support, children demonstrated less literacy growth even if high-quality writing materials were provided. Results support previous research that concludes high-quality teaching and the availability of literacy materials are important for children's emergent literacy skills (Guo et al., 2012).

### **Teachers' Literacy Knowledge and Perceptions**

Studies have indicated that preschool teachers often lack the knowledge necessary to effectively promote early literacy skills to their students (McCutchen et al., 2002; Phillips et al., 2008) and tend to overestimate what they know (Cunningham, Perry, Stanovich, & Stanovich, 2004; Cunningham, Zibulsky, & Callahan, 2009;). Knowledge calibration is an important factor to consider when examining preschool teacher knowledge. The calibration of one's own

knowledge level is the relationship between perceived and actual knowledge. Studies have found that teachers tend to overestimate their knowledge related to the subject of reading and are often unaware of what they do and do not know (Cunningham et al., 2004). It is important in the educational field to be able to recognize a lack of knowledge about specific topics. It has been suggested that people learn information more readily when they are aware of their current level of knowledge because attention can be given to areas where knowledge is unclear. If well calibrated in actual knowledge, teachers may be more receptive to finding and receiving training or help with information that they do not already hold (Cunningham et al., 2004).

Just because an educator is literate or has efficient literacy skills does not mean they possess the important skills and knowledge needed for effective reading instruction (Cunningham et al., 2009). Teacher education programs have often been criticized for not providing appropriate theoretical and practical training and a general insufficiency of teacher training in reading development has been found in many programs (Nolen, McCutchen, & Berninger, 1990). Moats (1994) examined practicing elementary school teachers' knowledge of spoken and written language structure. Results indicated that teachers had difficulty even with the most basic items and there was an overall lack of disciplinary knowledge in the area of early literacy (Moats, 1994).

Cunningham et al. (2004) found that some early childhood educators do not possess the knowledge base needed for effective instruction in areas of children's literacy, phonological awareness, and phonics knowledge. Moreover, teachers were not aware of their lack of knowledge. A total of 722 kindergarten, first, second, and third grade teachers from 48 schools took a survey regarding their knowledge and self-perceptions of their knowledge in the domain of reading. To measure knowledge calibration, teachers were asked to assess their perceptions of

their knowledge and skills in the areas of children's literature, phonological awareness, and phonics. They were asked to rate their current skill level on a Likert scale of 1) no experience, 2) minimal skills, 3) proficient, or 4) expert. Teachers were placed into subgroups of either low perceived knowledge or high perceived knowledge. In all domains measured, the majority of teachers rated their knowledge as proficient or expert (Cunningham et al., 2004).

Teachers in the high perceived knowledge group were compared to the low perceived knowledge group. In the area of children's literature, those teachers who categorized themselves as having higher levels of knowledge did perform significantly higher on the Title Recognition Test (TRT) compared to teachers who rated their knowledge lower and therefore some evidence was shown of knowledge calibration (Cunningham et al., 2004). Interestingly, in the area of phonological awareness, those teachers who rated themselves as possessing a greater level of knowledge actually had lower mean scores on the multiple-choice measurement of actual knowledge. Teachers tended to overestimate their level of knowledge and did not have the ability to calibrate their knowledge in the domain of phonological awareness. Only 9% of the teachers in the sample correctly estimated their lack of knowledge in phoneme awareness. These teachers rated themselves as having minimal or no skills or knowledge in this specific area and their performance on the actual knowledge measurement was in agreement. The authors suggest that teachers who are aware of their lack of knowledge will be most likely to benefit from professional development programs. There was no relationship between teachers' perceived and actual knowledge of implicit or explicit knowledge of phonics and teachers could not calibrate their knowledge in these areas (Cunningham et al., 2004).

Another study examined knowledge calibration in Pre-K through third grade teachers based upon Cunningham et al.'s (2004) research (Al-Hazza, Fleener, & Hager, 2008). Similar to

previous findings, teachers tended to overestimate their knowledge. Although teachers who rated themselves as having proficient or expert skills in the measured areas of phonological awareness and phonics did in fact score significantly higher than the teachers who perceived themselves lower, actual knowledge scores were still weak with mean scores of 53% and 61% correct, respectively. These reported low scores of measured actual knowledge do not reflect proficient or expert skills in the areas of phonological awareness and phonics. Results indicated that teachers lacked the knowledge of terminology and principles necessary to effectively teach children appropriate skills (Al-Hazza et al., 2008).

Cunningham et al. (2009) examined actual knowledge and perceived knowledge of written and spoken language in 20 preschool teachers. Teachers were given a knowledge assessment survey and were asked to predict how many of those questions they answered accurately. Teachers were also asked to rate their level of knowledge on certain literacy questions regarding literacy practices. Teachers significantly overestimated the number of accurate answers they actually provided on the knowledge assessment. Teachers' awareness of what they do and do not know is important for focusing on areas of weakness or where knowledge is uncertain. According to Cunningham et al. (2009), "Such reflection is a necessary component of teaching practice: it is only through actively knowing what one does not know that teachers can seek resources and training opportunities to ameliorate such deficits" (p. 500).

Shedd (2011) examined the relationships among early childhood educators' perceptions of themselves as literacy educators, literacy content knowledge, pedagogical literacy content knowledge, classroom literacy practices, and children's literacy growth. A total of 28 early childhood educators participated in the study and 105 children from the classrooms of the educators. The ELLCO assessment was used to examine teaching practices and the classroom

environment. Interviews were conducted to assess educators' perceptions of themselves as literacy educators (POTALE). Educator's literacy content knowledge was assessed along with children's knowledge of literacy concepts and children's vocabulary (Shedd, 2011).

Positive correlations were found between perceptions of teachers as literacy educators and both pedagogical and literacy content knowledge. A significant direct relationship emerged between literacy content knowledge and classroom literacy practices as well as between teachers' perceptions of themselves and their classroom literacy practices. Those educators who were more confident in their perceptions of themselves as literacy educators were more likely to score higher on the ELLCO. The relationship between classroom literacy practices and children's literacy growth was not statistically significant but classroom literacy practices seemed to have an indirect influence on literacy growth based upon the large regression weight. The author suggested that, "changes in literacy content knowledge, pedagogical literacy content knowledge, and POTALE trigger changes in classroom literacy practices, which in turn cause changes in literacy growth" (Shedd, 2011, p. 44).

### **Self-Assessment**

Self-assessment involves people making judgments about their own learning and performance and assists in directing focus to areas for improvement. Self-assessment encompasses two elements in the process of assessment: "the identification of criteria or standards to be applied to one's work, and the making of judgments about the extent to which work meets these criteria" (Boud & Falchikov, 1989, p. 529). Effective learners should have an accurate sense of their own strengths and weaknesses so that they can use to direct their attention in a productive course for improvement. Boud and Falchikov (1989) make the point that

sometimes the person who is assessing him or herself will have greater insight into their own knowledge and achievements while an observer rating that same person may have limited access to their knowledge (specifically applying this to student self-assessments and teacher ratings of their students).

Self-assessments have been used in various areas such as the organizational, medical, and educational fields. In the educational field, self-assessments are often used in terms of students assessing themselves as learners. Boud and Falchikov (1989) found that self-assessments are effective tools for facilitating students in bringing together various areas of learned material, to reflect on their achievements, and to consider implications for further learning. Self-assessment is also important in providing continual knowledge about students' capabilities and allowing them to improve weaknesses as needed. Potentially valuable support can be provided by the use of self-assessment for both teaching and learning (Adams & King, 1995). Longhurst and Norton (1997) suggest that self-assessment is an essential part of helping students to develop their own learning, as it teaches them to be more effective at monitoring their own performance. Boud and Falchikov (1989) performed an extensive literature review on various aspects of student self-assessment in relation to teachers' ratings of those students. One relatively consistent finding was that in most of the studies examined, a greater number of student self-assessments were in agreement with teacher ratings as compared to those in disagreement. Another trend found was that high achieving students tended to underestimate their performance while low achieving students were more likely to overestimate their performance (Boud & Falchikov, 1989).

Lynes (2012) focused on teacher self-evaluation using videotaped activities and interactions in the classroom. Self-assessing videotaped classroom activities allowed teachers more time to reflect on their practices and interactions. Often, teachers become automatic in how



they teach their students and in their routines as time goes on. Small-group table activities, mealtime, and circle time were videotaped and data were collected on open-ended questions and the expansion of students' utterances. Teachers also completed a questionnaire regarding their views on self-evaluation. Teachers reported that the self-evaluation process allowed effective assessment of student verbal interactions, the time spent videotaping and self-evaluating was worthwhile, and that the method would be useful in developing other strategies in their classrooms. Lynes (2012) suggested from the results that self-evaluation maintains or increases the use of teaching strategies, specifically in the expansion of students' utterances.

Stalmeijer et al. (2009) examined the effects of teacher self-assessment, student written feedback, and the combination of both. The participants included 37 physicians at a non-academic teaching hospital. Students on the physicians' clinical rotations also participated in the evaluation process. Both students and physicians completed a Likert scale questionnaire, both of which were identical except one was phrased from the teacher's point of view and the other from the student's point of view. Interviews were given to physicians pertaining to the value of self-assessment and feedback. Results indicated that some teachers viewed self-assessment as a useful tool because it provided standards for good clinical teaching and it stimulated reflection. It was also reported that the self-assessment allowed the teachers to view their teaching in a more structured manner (Stalmeijer et al., 2009). The self-assessment alone did not motivate all of the participants to implement changes, but was effective in defining standards for teaching. The authors noted that many of the older teachers saw no need for change but several of these teachers already engaged in some type of self-reflection on their teaching and thus already had a firm idea of their sense of self-efficacy and teaching. When combined with student feedback ratings, teachers were more likely to consider changing when there was a discrepancy between

the students' feedback with their matching self-assessed rating on the same question (Stalmeijer et al., 2009).

### **The Early Language and Literacy Classroom Observation**

The Early Language and Literacy Classroom Observation (ELLCO) is a proprietary instrument designed for use in classrooms for 3- to 5-year-old children, originally developed as the ELLCO Toolkit *Research Edition* in 2002 by Smith and Dickinson. It has been used in rigorous research in over 150 preschool classrooms, including the Head Start New England Quality Research Center (NEQRC) and the Literacy Environment Enrichment Project (LEEP), which are both based out of the Center for Children and Families at Education Development Center, Inc. The instrument has since been revised to create the ELLCO Pre-K Tool (Smith, Brady, & Anastasopoulos, 2008b). The changes made include more items and a focus on how materials in the classroom are used by teachers and children rather than just if the materials are available. Developers also increased the specificity and range of crucial literacy skills observed, such as phonological awareness, spoken vocabulary, and use of environmental print (Smith et al., 2008a).

The ELLCO Pre-K contains 19 items organized into five overall sections: Classroom Structure, Curriculum, The Language Environment, Books and Book Reading, and Print and Early Writing. The first two sections are combined to give a score on the *General Classroom Environment* subscale and the last three sections are combined to give a score on the *Language and Literacy* subscale. The first two sections deal with classroom organization, classroom management, materials, curriculum, personnel, child choice and initiative, and diversity in the classroom. The language environment section examines extended conversations, phonological

awareness, building vocabulary, and discourse climate. The last two sections look at the organization and characteristics of the book area along with approaches and quality of book reading as well as the early print and writing environment.

The psychometric properties of the revised ELLCO Pre-K observation tool were obtained through analyses of data collected from 2008 through 2010 as part of the Early Reading First project Reading to Nurture Excellence in Worcester (RENEW), funded by the U.S. Department of Education (Smith, Brady, & Anastasopoulos, 2012). Observations using the ELLCO Pre-K were conducted twice yearly in 35 classrooms across 3 years. The total number of observations during the 3-year period was 203. Observers were appropriately trained before research began and achieved an average interrater reliability of 74%. Cronbach's alpha for the *General Classroom Environment* subscale is 0.864 and for the *Language and Literacy* subscale is 0.922, demonstrating good internal consistency. Cronbach's alphas for the five sections were all high, ranging from .723 to .894 (Smith et al., 2012).

To examine the ability of the ELLCO Pre-K to measure stability and change over time, intervention and comparison classrooms, both consisted of Head Start teachers, from the RENEW project were compared. The intervention group participated in an intensive professional development program. All classrooms were observed once in the fall and once in the spring over 3 years. Means were consistently higher for the RENEW classrooms. Comparison classroom means remained relatively stable from fall to spring while RENEW classroom means were significantly different between fall and spring across all subscales and sections (Smith et al., 2012).

The psychometric properties of the ELLCO Toolkit, *Research Edition*, (Smith & Dickinson, 2002) were obtained through analyses of data collected from the NEQRC research

project (1998-1999) and the LEEP project (1998-2001) by Smith et al. (2008a). Cronbach's alpha for the *General Classroom Environment* subscale is .83, for the *Language, Literacy, and Curriculum* subscale is .86, and for the overall total score is .90, all demonstrating good internal consistency. The validity of the ELLCO classroom observation was examined in conjunction with the Assessment Classroom Profile (Abbott-Shim & Sibley, 1997), which has been widely used in assessing overall quality of early childhood classrooms. Moderate and positive correlations ( $r = .41, .31, \text{ and } .44$ ) were found between the ELLCO Toolkit and the Classroom Profile's *Learning Environment* subscale, demonstrating convergent validity. The ELLCO Toolkit has also been used in correlational research to provide evidence of the tool's ability to predict children's literacy development. The ELLCO Toolkit was used to determine the contributions of classroom quality on children's receptive vocabulary using the *Peabody Picture Vocabulary Test-III* (Dunn & Dunn, 1997) and children's early literacy scores on the *Profile of Early Literacy Development* (Dickinson & Chaney, 1998). Taking other factors into account (such as home language, gender, and age), scores on the ELLCO Toolkit observation accounted for 80% of the between-classroom variance in vocabulary and 67% of the between-classroom variance in early literacy (Smith et al., 2008a).

## CHAPTER II

### METHOD

#### **Participants**

Self-rating surveys were distributed to a total of 38 teachers. One survey was not returned. Four surveys were excluded from analysis; three came from assistants rather than lead teachers and the fourth had moved to an administrative position and thus was not in a classroom to be observed. A total of 36 observations were conducted. One teacher who was observed did not complete the self-rating survey due to turnover while the other was unable to turn in the survey for medical reasons, leading to a response rate of 97.1% and a final total of 34 matched pairs of scores. Table 3.1 represents a summary of the demographics for the teachers participating in the study. The final sample consisted of 34 early childhood educators (88.2% female, 5.9% male, 5.9% unspecified) from 14 different childcare centers located in Chattanooga, Tennessee.

The participants' ages ranged from 19- to 66-years-old ( $M = 36.94$ ,  $SD = 13.45$ ). Of the 34 participants, 14 (41.2%) were Caucasian, 14 (41.2%) were African American, 2 (5.9%) were classified as other, and 4 (11.8%) did not provide a response. The ages of the children in their classrooms ranged from 2.5 to 5-years-old. The participants' reported years of experience in early childhood education ranged from less than 1 year to 40 years ( $M = 12.39$ ,  $SD = 10.03$ ). Participants reported their highest level of education as: a high school diploma (3, or 8.9%), some college credit (13, or 38.2%), Associate's degree (7, or 20.6%), child development

associate credential (2, or 5.9%), Bachelor's degree (7, or 20.6%), graduate degree (1, or 2.9%), and one participant did not report education level. Participants also reported their approximate number of hours of early childhood education training within the past year. The state of Tennessee requires that early childhood educators clock 12 in-service training hours annually. An additional 6 hours of training on top of the licensing regulations of 12 hours warrants a 3-star rating under the professional development dimension for the Tennessee Star-Quality Child Care Program (Tennessee Department of Human Services). Of the 34 participants, 4 (11.8%) reported having between 0-11 training hours during the past year, no participants reported between 12-17 hours, 28 (82.3%) reported receiving 18 hours or more within the last year, and 2 participants did not respond.

Of the 14 childcare centers included in the study, 10 are not for profit and primarily serve children from low-income families. Nine of those 10 centers have participated for the past eight years in an ongoing program that provides evaluation consultation, data collection, and professional development classes. Observations using the ELLCO Pre-K started Fall 2011 in these classrooms. Of the total 34 participants, 13 (38.2%) have been observed with the ELLCO more than once, 9 (26.5%) having five total observations since Fall 2011. The tenth center serving children from low-income families recently began their participation in the program and thus do not have observations before Fall 2013. Two of the childcare centers are for-profit, private preschools while the remaining two are university-affiliated.

Table 3.1 Teacher Demographics

		n	%
Gender	Females	30	88.2
	Males	2	5.9
	No response	2	—
Teacher Ethnicity	African American	14	41.2
	Caucasian	14	41.2
	Other	2	5.8
	No response	4	—
High Level of Education	High School	3	8.9
	Some college	13	38.2
	Child Dev. Associate	2	5.9
	Associate's	7	20.6
	Bachelor's	7	20.6
	Graduate	1	2.9
	No response	1	—
Field of Study	Early Childhood Education	16	47
	Secondary Education	2	5.9
	School Counseling	1	2.9
	Education	1	2.9
	Other	6	17.6
	No response	8	—
Years Teaching in Early Childhood Education	0-5.5	10	30.3
	6-10	7	20.6
	11-20	9	26.5
	21+	7	20.6
	No response	1	—
Number of Hours of ECE Training	0-11	4	11.8
	12-17	0	0
	18+	28	82.3
	No response	2	—

## **Measures**

A copy of the ELLSS and demographic questionnaire are included in Appendix A. The ELLCO Pre-K is a proprietary instrument; please reference Smith et al. (2008b).

### **Demographics**

Demographic information, including gender, ethnicity, age, and education level, was collected. Additionally, the participants were asked to provide the number of years of experience they had in early childhood education, number of early childhood education training hours they have received in the past year, type of training they had received, number of years they had been working with their current age group of children, number of years they had been working for their current childcare program, and their major area of study. Participants were also asked to report the number of children and the age range of children in their classroom.

### **ELLCO Pre-K Observation**

The *Early Language and Literacy Classroom Observation Pre-K Tool* (ELLCO Pre-K) measures the early literacy and language environment and was specifically designed for use in center-based classrooms serving 3- to 5-year-old children (Smith et al., 2008a). Originally developed in 2002, the tool has since been revised based upon recent research on early language and literacy development in young children. It examines practices and environmental supports that encourage children's literacy and language development. The ELLCO contains 19 total items that are further averaged to create 5 sections (Classroom Structure, Curriculum, Language Environment, Books and Book Reading, Print and Early Writing). The sections are then averaged to create 2 subscales: *General Classroom Environment* subscale, with combined scores



from the Classroom Structure and Curriculum sections, and *Language and Literacy* subscale, with combined scores from the Language Environment, Books and Book Reading, and Print and Early Writing sections (Smith et al., 2008a).

The Classroom Structure section examines items related to classroom organization and content, children's access to and use of provided materials, teacher's management practices, and adult roles and professional focus. The Curriculum section addresses the curricular environment, instructional strategies, opportunities for child choice and initiative, and teacher's responses to and reflection of diversity in the classroom. The Language Environment section focuses on the discourse climate, opportunities for extended conversations, children's vocabulary development, and strategies used to promote phonological awareness. The Books and Book Reading section examine the organization and use of the book area, characteristics of the provided books, the presence and use of books across centers and content areas of the curriculum, and the quality and frequency of book reading. The Print and Early Writing section focuses on the availability of writing materials in the writing center, use of environmental print, instructional strategies to encourage and teach writing, and opportunities that build awareness of the varied purposes of writing (Smith et al., 2008a).

Each item of the ELLCO Pre-K was constructed to describe characteristics of classroom practices at five clearly defined levels, from *deficient* to *exemplary*, with the highest possible number demonstrating the most accomplished level of performance. The level or score of 5 represents *exemplary* practice, 4 indicates *strong* practice, 3 indicates *basic* practice, 2 represents *inadequate* practice, and 1 indicates *deficient* practice. Each of the 19 items consists of "anchor statements" for each level and descriptive indicators used as guidance for scoring. An example of a level 5 anchor statement is as follows: "There is compelling evidence that formal and informal

opportunities are designed to build children’s sound awareness” (Smith et al., 2008a, p. 21). Descriptive indicators provide more detail about the types and quality of practice that should be observed in order to receive a specific rating. Descriptive indicators are used as “guideposts” and “exemplars” and are not intended to be a checklist. Observers are provided with an evidence page to record pertinent and detailed evidence observed during the classroom visit (Smith et al., 2008a).

### **Early Language and Literacy Self-Rating Survey**

In addition to the ELLCO Pre-K observations, teachers completed the Early Language and Literacy Self-Rating Survey (ELLSS), which includes statements that reflect the dimensions measured by the ELLCO Pre-K. The ELLSS was created by splitting the 19 ELLCO Pre-K items into 48 separate statements worded in first person. Participants rated their agreement with the statements on the ELLSS on a 1-5 scale (strongly agree to strongly disagree). Each of the 19 individual items from the ELLCO Pre-K were used to create between 2-4 statements on the ELLSS, depending upon the complexity of or amount of indicators covered by the ELLCO Pre-K item. For example, Opportunities for Extended Conversations (item 9 on the ELLCO Pre-K) examines if teachers initiate conversations with children in their classroom that maximizes talk and builds specific oral language skills, if teachers create opportunities for children to interact in small group, large group, and individual conversations, and if teachers use strategies that further promote extended conversations, analyzing, predicting, and problem solving. This one item on the ELLCO Pre-K was separated to create three statements for the ELLSS. Splitting the ELLCO Pre-K items into 48 simply worded, first person statements allowed participants to better

understand the specific practices or environmental supports that they were asked to rate. The ELLSS took approximately 20 minutes for participants to complete.

## **Procedure**

All procedures were approved by the University of Tennessee at Chattanooga Institutional Review Board (see Appendix B).

ELLCO Pre-K observations were scheduled at mutually agreed upon times with teachers or their directors. Observations began the last week of August and continued through the first week of October, with each classroom observed only once. Three trained and reliable observers, two graduate students and one professional development provider, conducted the observations. Observations started in the morning right before the classroom's circle time began. This allowed observers to see a formal book-reading session between the teacher and students. In most classrooms, center time and/or a planned activity (such as writing or art) were also observed during the observation period. Observations lasted between 1.5 to 2.5 hours.

Self-rating surveys, consents, and demographic questionnaires were distributed to participants in unmarked envelopes by the three observers. Surveys were first distributed in the second week of September and all were completed and collected by the first week of October. Some teachers had already been observed before surveys were first distributed and thus surveys were taken back to those participants to be completed. A group of 11 teachers (4 of which were excluded) received the survey packets during an early childhood education training class, in which the surveys were completed and collected at that time. For teachers who had not yet been observed and did not participate in the early childhood education training class, surveys were distributed the day of their observation, immediately after the observation had ended. In all

instances, participants were instructed to place the completed survey, consent, and demographic questionnaire back into the envelope and were told to seal it. Other than during the training class, the envelopes were picked up at a later day by one of the three observers. Across the 34 participants, surveys were completed between 1-27 days after the observation was conducted or 5-13 days before the observation was conducted.

Unique identifiers were provided on the self-rating survey, consent, and demographic questionnaire before being given to the participants. Each participant received the survey, consent, and demographic questionnaire in an unsealed envelope. After they were completed, the participants placed all forms back into the envelope and sealed it. The consent form asked for the participants' actual names but also included the unique identifier. The demographic questionnaire and self-rating survey were only marked with the unique identifier but were placed with the consent in the same envelope. The unmarked, sealed envelopes were given to a research team member, who was the only investigator that saw participants' actual names and matching unique identifiers. A master list of names and their matching unique identifiers was created. ELLCO Pre-K observations were initially identified with participants' actual names. After consents were collected and a master list was created, the ELLCO Pre-K observations were de-identified and provided with their matching unique identifiers before analysis.

## **Analyses**

Bivariate correlations using Pearson  $r$  were used to examine the relationship between observer ratings and self-ratings on the *General Classroom Environment* and *Language and Literacy* subscales as well as the Classroom Structure, Curriculum, Language Environment, Books and Book Reading, and Print and Early Writing sections that comprise the subscales. For

Pearson  $r$ , a value of .00 indicates no linear relationship between the two measured variables while a value of -1.00 or +1.00 indicates a perfect negative or positive linear relationship exists, respectively (Rosenthal & Rosnow, 2008). Pearson  $r$  correlations were also computed to examine the relationship between mean observer and self ratings on the two subscales and five sections and teacher demographic variables, including highest level of education, years teaching in early childhood education, number of training hours in early childhood education during the past year, and total number of previous observations.,

Internal-consistency reliability demonstrates the degree of relatedness amongst individual items on an instrument when those individual items are combined to obtain a single score. There is no specific criterion that constitutes an acceptable level of internal-consistency reliability but commonly known measures of intelligence and personality average to be .87 and .84, respectively, and are considerable measurements in terms of psychometric properties. However, a multitude of other tests with lower levels of reliability are often used (Rosenthal & Rosnow, 2008). Cronbach's alpha was calculated based upon the intercorrelations among the 48 items on the ELLSS as well as among the sets of individual items that comprise each of the five sections and each of the two subscales.

Independent Samples T-Tests were conducted to see if significant differences in mean observer and self-rating scores existed between participants who had only one observation and those who had a total of five observations on the five sections of the ELLCO Pre-K and ELLSS. An independent Samples T-Test can be used to compare means between one group that is presumed to be unrelated to another group (Rosenthal & Rosnow, 2008). This comparison was made to examine if being observed multiple times had an effect on how participants were rated by observers or how participants rated themselves in comparison to participants that had never

previously been observed until the time of the current study. Because some of the participating childcare centers partake in a program that provides consultation, data collection, and professional development classes, some teachers at these centers have been observed multiple times since observations using the ELLCO Pre-K began in Fall 2011. Due to teacher turnover, only 9 participants had a total of five observations since Fall 2011. Twenty-one teachers included in the current study are either at childcare centers that are not a part of the professional development program and thus were asked to participate for purposes of this study or the teachers are brand new to childcare centers that are involved in the program.

Repeated Measures Analysis of Variance (ANOVA) was used to examine differences between mean observer ratings on the ELLCO Pre-K and mean self-ratings on the ELLSS for the two subscales and five sections. A common use of a repeated measures design is in the administration of tests or subscales in a series where the simplest design measures or observes participants twice (Rosenthal & Rosnow, 2008). Repeated measures ANOVA was also used to examine differences in mean observer ratings across time for teachers who have had observations take place twice annually since Fall 2011, leading to a total of five iterations.

## CHAPTER III

### RESULTS

#### **Observation Ratings as Measured by the ELLCO Pre-K**

The quality of the classroom environment and teachers' instructional practices were rated using the ELLCO Pre-K on a 1 to 5 rating scale in areas related to classroom structure, curriculum implementation, the language environment, characteristics of the book area, approaches to book reading, and the print and early writing environment. The average rating of the *General Classroom Environment* subscale (averaged scores from the Classroom Structure and Curriculum sections) was 4.64 and 8.8% of participants received ratings of *basic* or below (rating of 1, 2, or 3). The average rating of the *Language and Literacy* subscale (averaged scores from the Language Environment, Books and Book Reading, and Print and Early Writing sections) was 3.91 and 41.2% of participants received ratings of *basic* or below. Table 4.1 illustrates how many participants received a rating at each of the five levels (*deficient* to *exemplary*) on the two subscales.

Table 4.1 Number and Percentage of Participants with Ratings of 1 to 5 on the Subscales of the ELLCO Pre-K

Subscale	Deficient (1)	Inadequate (2)	Basic (3)	Strong (4)	Exemplary (5)
<i>Gen. Class. Enviro.</i>	0	0	3 (8.8%)	20 (58.8%)	11 (32.4%)
<i>Lang. &amp; Lit.</i>	0	2 (5.9%)	12 (35.3%)	20 (58.8%)	0

Note: Frequencies are in parentheses; *Gen. Class. Enviro.* = *General Classroom Environment*; *Lang. & Lit.* = *Language and Literacy*

When examining the five sections separately, lowest quality was observed in the areas related to the Print and Early Writing section with an average rating of 3.61 and the Language Environment section with an average rating of 3.79. The section rated highest in quality was Classroom Structure with an average rating of 4.89.

Table 4.2 illustrates the number of participants that received a rating at each of the five levels on the five sections that comprise the two subscales. On the Classroom Structure section, 2.9% of participants received a rating of *basic* or below. This section examines the organization of the classroom, contents of the classroom, classroom management, and the roles and interactions of personnel in the classroom. For the Curriculum section, examining approaches to curriculum, opportunities for child choice and initiative, and recognition of diversity, 14.7% of participants received ratings of *basic* or below. The Language Environment section attends to the teacher's efforts to build vocabulary, phonological awareness instruction, teacher's guidance of extended conversations, and a positive discourse climate. Forty-four percent of participants received a rating of *basic* or below for the Language Environment section. On the Books and Book Reading section, which examines the organization of the book area, characteristics of books, use of books in learning, approaches to book reading, and quality of book reading, 23.5%



of participants received a rating of *basic* or below. For the Print and Early Writing section, 55.9% of participants received a rating of *basic* or below. The Print and Early Writing section assesses the early writing environment, the teacher’s support for children’s writing, and the display and use of environmental print.

Intercorrelations and reliability of sections and subscales on the ELLCO Pre-K were consistent with reported psychometric properties (Smith et al., 2012).

Table 4.2 Number and Percentage of Participants with Ratings of 1 to 5 on the Sections of the ELLCO Pre-K

Section	Deficient (1)	Inadequate (2)	Basic (3)	Strong (4)	Exemplary (5)
Classroom Structure	0	0	1 (2.9%)	7 (20.6%)	26 (76.5%)
Curriculum	0	1 (2.9%)	4 (11.8%)	17 (50%)	12 (35.3%)
Language Enviro.	0	5 (14.7%)	10 (29.4%)	17 (50%)	2 (5.9%)
Books & B.R.	0	2 (5.9%)	6 (17.6%)	20 (58.8%)	6 (17.6%)
Print & Early Writing	0	6 (17.6%)	13 (38.2%)	15 (44.1%)	0

*Note:* Frequencies are in parentheses; Books & B.R. = Books & Book Reading.; Language Enviro.= Language Environment

### Intercorrelations among Sections and Subscales

Table 4.3 presents means, standard deviations, and intercorrelations among the sections and subscales of the ELLSS. On the ELLSS, all sections and subscales were significantly correlated at the .01 or .05 levels.

Table 4.3 Descriptive Statistics and Intercorrelations among Subscales and Sections on ELLSS

Measures	M	SD	1	2	3	4	5	6	7
1. <i>Gen. Class. Enviro.</i>	4.48	.35	—						
2. Classroom Structure	4.48	.40	.928**	—					
3. Curriculum	4.49	.38	.868**	.621**	—				
4. <i>Language and Lit.</i>	4.52	.33	.755**	.745**	.597**	—			
5. Language Enviro.	4.58	.33	.682**	.584**	.659**	.856**	—		
6. Books & B.R.	4.64	.30	.663**	.685**	.482**	.755**	.703**	—	
7. Print & E.W.	4.34	.55	.588**	.612**	.422*	.871**	.568**	.393*	—

\*p < .05 \*\*p < .01 Note: Gen. Class. Enviro. = General Classroom Environment; Language and Lit. = Language and Literacy; Language Enviro. = Language Environment; Books & B.R. = Books and Book Reading; Print & E. W. = Print and Early Writing

### Reliability Analysis of ELLSS

Internal consistency reliability was analyzed for the 48 individual items, items that made up each of the five sections, and items that comprised the two subscales, using Cronbach's alpha coefficient. Analysis of the 48 individual items revealed high reliability ( $\alpha = .93$ ). Individual items were averaged to create section scores and subscale scores. Classroom structure contained items 1-9, Curriculum contained items 10-16, Language Environment contained items 17-26, Books and Book Reading contained items 27-37, and Print and Early Writing contained items 38-48. Cronbach's alpha values for the five sections are as follows: Classroom Structure ( $\alpha = .80$ ), Curriculum ( $\alpha = .69$ ), Language Environment ( $\alpha = .80$ ), Books and Book Reading ( $\alpha = .69$ ), and Print and Early Writing ( $\alpha = .90$ ), demonstrating acceptable reliability for the five sections. Items 1-16 were averaged to create a score for the *General Classroom Environment* subscale and items 17-48 were averaged to create a score for the *Language and Literacy* subscale. The

*General Classroom Environment* subscale ( $\alpha = .85$ ) and the *Language and Literacy* subscale ( $\alpha = .91$ ) both demonstrate high internal reliability.

### **Self-Ratings as Measured by the ELLSS**

Participants rated themselves on 48 items from the ELLSS, which directly reflect the dimensions measured by the ELLCO Pre-K observation tool. Participants rated their teaching practices on a scale from 1 to 5 (strongly disagree to strongly agree that they implement that specific practice in their classroom). Scores from multiple items were averaged to create item, section, and subscale scores similar to those on the ELLCO Pre-K (19 item scores, 5 section scores, and 2 subscale scores).

The mean self-rating score on the *General Classroom Environment* subscale was 4.48 and 8.8% of participants rated themselves with a score of 3 (scores did not fall below a 3). The mean self-rating score on the *Language and Literacy* subscale was 4.52 and 2.9% of participants gave themselves a rating of 3 (scores again did not fall below a 3). The distribution of participants with self-ratings at each of the five levels on the ELLSS is displayed in Table 4.5. Of the five sections, the lowest self-rated section was Print and Early Writing with an average of 4.34 and the highest self-rated section was Books and Book Reading with an average of 4.64. Of the 34 participants, 14.7% rated themselves with a score of 3 on the Classroom Structure section, 8.8% rated themselves with a score of 3 on the Curriculum section, no participants rated themselves with a 1, 2, or 3 on the Language Environment section or Books and Book Reading Section, and 17.6% rated themselves with a score of 2 or 3 on the Print and Early Writing section. Table 4.6 shows the number of participants that rated themselves at each of the five levels on the five sections of the ELLSS.

Table 4.5 Number and Percentage of Participants with Self-Ratings between 1 to 5 on the Subscales of the ELLSS

Subscale	Strongly disagree (1)	Disagree (2)	Neither (3)	Agree (4)	Strongly agree (5)
<i>Gen. Class. Enviro.</i>	0	0	3 (8.8%)	30 (88.2%)	1 (2.9%)
<i>Lang. &amp; Lit.</i>	0	0	1 (2.9%)	32 (94.1%)	1 (2.9%)

Note: Frequencies are in parentheses; *Gen. Class. Enviro* = *General Classroom Environment*; *Lang. & Lit.* = *Language and Literacy*

Table 4.6 Number and Percentage of Participants with Self-Ratings between 1 to 5 on the Sections of the ELLSS

Section	Strongly disagree (1)	Disagree (2)	Neither (3)	Agree (4)	Strongly Agree (5)
Classroom Structure	0	0	5 (14.7%)	28 (82.4%)	1 (2.9%)
Curriculum	0	0	3 (8.8%)	24 (70.6%)	7 (20.6%)
Language Environment	0	0	0	29 (85.3%)	5 (14.7%)
Books & B.R.	0	0	0	28 (82.4%)	6 (17.6%)
Print & Early Writing	0	2 (5.9%)	4 (11.8%)	27 (79.4%)	1 (2.9%)

Note: Frequencies are in parentheses; Books & B.R. = Books and Book Reading

### **Relations among Observer Ratings, Self-Ratings, and Teacher Characteristics**

Pearson product-moment correlation coefficients were computed to examine the relationship between observers' ratings and participants' self-ratings. No significant correlations were found between the observers' ratings on the ELLCO Pre-K and teachers' ratings on the ELLSS for the two subscales or five sections. Correlations ranged from .127 to .183 on the subscales and from .042 to .275 for the five sections. As discussed later in regards to limitations

of the current study, future research needs to be conducted with a larger sample in order to further examine the validity and reliability of the ELLSS.

The possible influences of teacher characteristics on observer and self-ratings were examined by computing Pearson product-moment correlation coefficients for teacher demographic variables, which included age, education level and number of children in the classroom. Some participants have multiple observations since Fall 2011 due to their participation in a program that provides consultation, data collection, and professional development training. Therefore, total number of observations (participants can have a maximum of 5) was also correlated with observer and self-ratings using Pearson product-moment correlation coefficient. None of these correlations reached significance with the ELLCO Pre-K observation ratings. The range of correlations between ELLCO Pre-K section scores and teacher demographic variables are as follows: teachers' ages (-.321 to .006), education level (-.021 to .314), number of children in the classroom (-.023 to .271) and total number of observations (-.150 to .273).

Turning to the ELLSS section scores, only two significant correlations with teacher characteristics were observed. Education level was significantly correlated with the Print and Early Writing section self-rating scores ( $r = .347, p < .05$ ) in which participants with a higher education level were more likely to rate themselves higher on items related to the print and early writing environment. Total number of observations was significantly related to self-rating scores on the Classroom Structure section of the ELLSS ( $r = .374, p < .05$ ) where teachers with more previous observations were significantly more likely to rate themselves higher in areas related to their classroom's structure. The range of correlation coefficients for the remaining teacher demographic variables are as follows: teachers' ages (.001 to .410), number of children in the

classroom (-.243 to .051), and education level with the remaining four sections (.021 to .247) however, these values did not reach significance.

A One-way ANOVA was conducted to examine the effects of years of experience as well as reported number of training hours on observer rating and self-rating scores for the five sections. Years of experience in early childhood education was categorized by 0-5.5 years, 6-10 years, 11-20 years, and 21 or more years based upon nearly equal quartiles. Annual teacher turnover rates in early childhood education range from 25-60% (Zaslow & Martinez-Beck, 2006). With the five sections as the dependent variables and years of experience or number of training hours as the factor, results indicated that years of experience and number of training hours did not significantly affect mean observer ratings on the ELLCO Pre-K. However, years of experience did significantly influence mean self-ratings on the ELLSS Classroom Structure ( $F[3, 29] = 4.117, p = .015$ ) and Books and Book Reading sections ( $F[3, 29] = 3.682, p = .023$ ). Tukey HSD post hoc comparisons revealed that significant mean differences existed between participants with 6-10 years of experience ( $M = 4.14, SD = .47$ ) and those with 21 or more years of experience ( $M = 4.79, SD = .12$ ) on the Classroom Structure Section. Similarly, post hoc analyses revealed significant differences on the Books and Book Reading section for participants with 6-10 years of experience ( $M = 4.39, SD = .40$ ) and those with 21 or more years of experience ( $M = 4.86, SD = .11$ ).

Number of training hours was categorized by 0-11 hours ( $N = 4$ ), 12-17 hours ( $N = 0$ ), and 18 or more hours ( $N = 28$ ). According to the Tennessee Star-Quality Child Care Program, early childhood educators are required to have 12 in-service training hours annually and an additional 6 hours warrants a 3-star rating (Tennessee Department of Human Services). One-way ANOVA results indicated significant differences in mean self-ratings on the Classroom Structure

section ( $F[1, 30] = 15.157, p = .001$ ) and Print and Early Writing section ( $F[1, 30] = 5.796, p = .022$ ). Participants with over 18 hours of early childhood education training within the past year rated themselves higher on the Classroom Structure section ( $M = 4.56, SD = .34$ ) than those with 0-11 hours of training ( $M = 3.86, SD = .26$ ). Over 18 hours of training also warranted higher self-rating means ( $M = 4.41, SD = .49$ ) on the Print and Early Writing section as compared to 0-11 training hours ( $M = 3.73, SD = .82$ ).

Additional analyses were conducted to examine differences between observer ratings (from the ELLCO Pre-K) and self-ratings (from the ELLSS). Figure 4.1 represents mean observer ratings and self-ratings on the *General Classroom Environment* and *Language and Literacy* subscales. A one-way within subjects repeated measures ANOVA was conducted to assess mean differences between observer ratings and self-ratings on the two subscales. Using two factor levels, observer ratings and self-ratings were the within-subjects variables for the analysis of both subscales. No significant differences were found for the *General Classroom Environment* subscale. However, repeated measures ANOVA indicated that significant differences existed between observer ( $M = 3.91$ ) and self-rating ( $M = 4.52$ ) scores on the *Language and Literacy* subscale ( $F[1, 33] = 35.54, p < .01, \eta^2 = .52$ ) as shown in Table 4.7.

Table 4.8 displays a comparison of mean observer ratings and self-ratings for the five sections that comprise the two subscales. The *General Classroom Environment* includes two sections: Classroom Structure and Curriculum. A one-way repeated measures ANOVA was used to compute differences between mean observers' scores and participants' self-rating scores. Results revealed differences in the Curriculum section were not significant. However, significant differences existed between observers' ratings and participants' self-ratings on the Classroom Structure section ( $F[1, 33] = 33.54, p < .01, \eta^2 = .50$ ). Observers rated the Classroom Structure

section higher ( $M = 4.89$ ) than participants rated themselves ( $M = 4.47$ ). The *Language and Literacy* subscale encompasses three sections: The Language Environment, Books and Book Reading, and Print and Early Writing. A one-way repeated measures ANOVA was used to detect any significant differences between mean observer and self ratings for each of the three sections that make up the *Language and Literacy* subscale (observer and self ratings were the within-subject variables). Significant differences between observer and self-rating mean scores existed for the Language Environment section ( $F[1, 33] = 41.40, p < .01, \eta^2 = .56$ ), the Books and Book Reading section ( $F[1, 33] = 10.18, p < .01, \eta^2 = .24$ ), and the Print and Early Writing section ( $F[1, 33] = 23.45, p < .01, \eta^2 = .41$ ). The Language Environment, Books and Book Reading, and Print and Early Writing sections were rated of higher quality by participants,  $M = 4.58, 4.64, 4.34$ , than by the observers,  $M = 3.79, 4.25, 3.61$ , respectively.

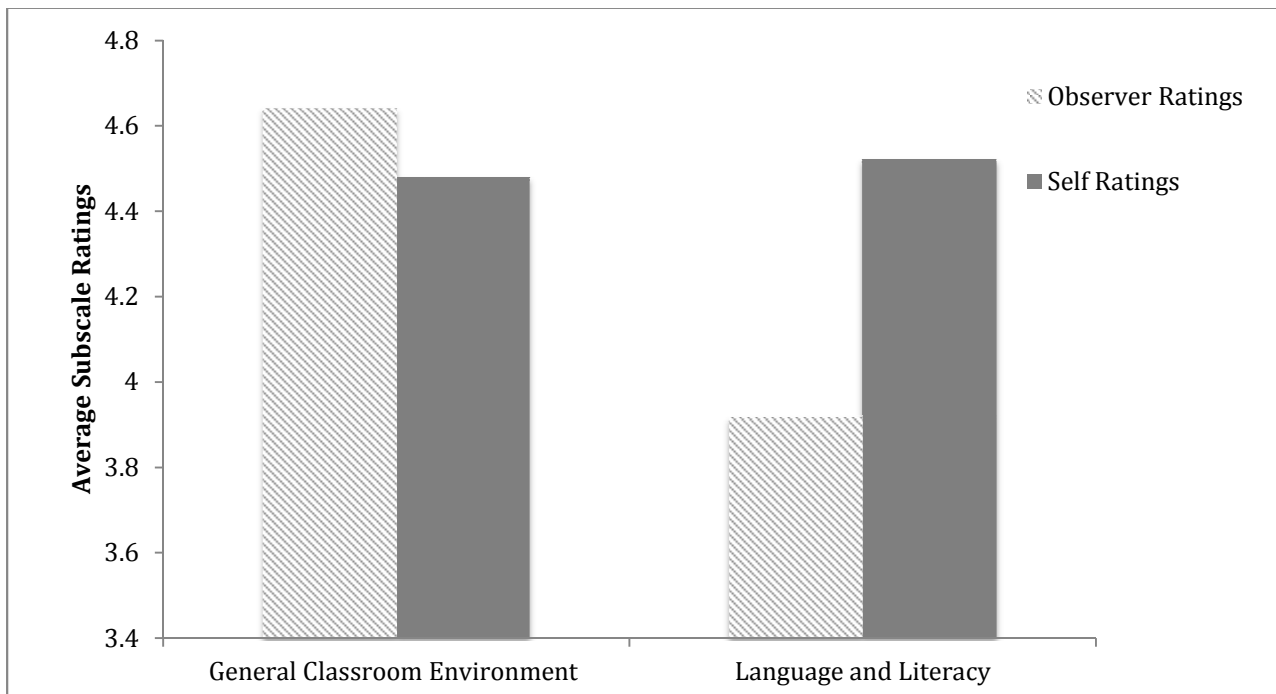


Figure 4.1 Mean observer ratings and self-ratings on the *General Classroom Environment* and *Language and Literacy* subscales



Table 4.7 Repeated Measures ANOVA Examining Differences among Mean Observer Ratings and Self-Ratings of Participants on the *Language and Literacy* Subscale

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	$\eta^2$	<i>p</i>
Observer vs. Self	6.228	1	6.228	35.543	.519	.000
Error	5.782	33	.175			

Table 4.8 Comparison of Mean Observer Ratings and Mean Self-Ratings on the Five Measured Sections

Section	Mean Observer Ratings	Mean Self-Ratings
Classroom Structure	4.89 (.29)	4.47 (.40)
Curriculum	4.43 (.64)	4.49 (.38)
Language Environment	3.79 (.69)	4.58 (.33)
Books & Book Reading	4.25 (.66)	4.64 (.30)
Print & Early Writing	3.61 (.76)	4.34 (.55)

*Note:* Standard deviations are in parentheses.

### Examination of Previous ELLCO Pre-K Observations

Nine of the 14 childcare centers included in the current study have participated in ELLCO Pre-K observations since Fall of 2011; classrooms at these centers have been observed twice yearly (Fall 2011, Spring 2012, Fall 2012, Spring 2013, & Fall 2013). The previously collected data were analyzed to examine possible trends across time. Due to teacher turnover, only 9 teachers (6 females, 1 male, 2 unspecified) have had observations take place each of the five possible times since Fall 2011. Demographic information for this sample of 9 teachers are as follows: age range of 33- to 56-years-old ( $M = 42.14$ ); 6 African American, 2 Caucasian, 1

unspecified; years of experience ranged from 3 to 28 years; number of early childhood training hours within the past year ranged from 20 to 48 hours ( $M = 29.9$ ); 1 reported to have a child development associate credential, 2 reported some college, and 5 reported an Associate's degree. As shown in Table 4.9, a repeated measures ANOVA analysis indicated that mean observation ratings on the *General Classroom Environment* subscale of these 9 teachers were significantly different across time ( $F[4, 32] = 4.13, p < .01, \eta^2 = .34$ ).

Table 4.9 Repeated Measures ANOVA Examining Significant Differences in Mean Observer Ratings on the *General Classroom Environment* Subscale Across Time

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	$\eta^2$	<i>p</i>
Iteration	.759	4	.190	4.133	.341	.008
Error	1.469	32	.046			

Table 4.10 illustrates mean observation ratings and standard deviations across the five iterations. The highest mean rating on the *General Classroom Environment* subscale was given at iteration 2 while the lowest was given at iteration 5. Results of the Bonferroni post-hoc test showed a significant difference in mean observation ratings between iteration 2 ( $M = 4.97$ ) and iteration 4 ( $M = 4.57$ ),  $p < .05$ , but no other significant differences existed between iterations. A trend of improvement was not evident across time for teachers with five total observations.

Table 4.10 Comparing Mean Observer Ratings with Standard Deviations on the *General Classroom Environment* Subscale Across Time for Teachers with Five Total Iterations

Iteration	Mean Observation Rating	<i>SD</i>
1	4.86	.07
2	4.97	.02
3	4.82	.07
4	4.57	.10
5	4.81	.07

Table 4.11 displays mean observation ratings and standard deviations across the five iterations on the *Language and Literacy* subscale. For the *Language and Literacy* subscale, the highest mean rating was demonstrated at iteration 3 ( $M = 4.95$ ) and the lowest mean rating was demonstrated at iteration 5 ( $M = 3.87$ ). However, repeated measures ANOVA indicated that mean ratings on the *Language and Literacy* subscale were not significantly different across time for the teachers who had a total of five iterations on the ELLCO Pre-K. As revealed in Table 4.11, scores were relatively similar across time for this subscale.

Table 4.11 Comparing Mean Observer Ratings with Standard Deviations on the *Language and Literacy* Subscale Across Time for Teachers with Five Total Iterations

Iteration	Mean Observation Rating	<i>SD</i>
1	4.06	.48
2	4.13	.86
3	4.95	.30
4	3.88	.59
5	3.87	.52

### **Comparison of Observer and Self-Rating Scores Between Participants with One Observation and Five Observations**

An independent samples t-test was conducted to compare mean observer scores and self-rating scores on the five sections between participants who had a total of five observations since Fall 2011 ( $N = 9$ ) and those who had their first observation take place for the current study ( $N = 21$ ). Results indicated that mean observer and self-rating scores did not significantly differ on the Curriculum, Language Environment, Books and Book Reading, or Print and Early Writing sections. However, mean observer ratings did significantly differ between teachers with one observation ( $M = 4.35$ ,  $SD = .44$ ) and teachers with five observations ( $M = 4.68$ ,  $SD = .21$ ),  $t(27) = -2.73$ ,  $p = .011$ , for the Classroom Structure section. Results also revealed significant differences between mean self-ratings on the Classroom Structure section of the ELLSS for teachers with one observation ( $M = 4.82$ ,  $SD = .35$ ) and teachers with five observations ( $M = 5.0$ ,  $SD = .00$ ),  $t(20) = -2.31$ ,  $p = .032$ ).

## CHAPTER IV

### DISCUSSION

The results of the present study revealed several important findings in relation to how early childhood educators rate their own classroom practices and environmental supports compared to ratings given by observers measuring the same dimensions of the early language and literacy environment.

#### **Discrepancies Between Observers' and Participants' Ratings**

Overall, early childhood educators rated their practices and environmental supports higher than observers did in the areas of Curriculum, Language Environment, Books and Book Reading, and Print and Early Writing. However, early childhood educators rated themselves lower on the Classroom Structure section. When further examining the 19 items that comprise these sections, the areas of greatest discrepancy were related to phonological awareness, building children's vocabulary, using books for learning, quality of book reading, the writing environment, and support for children's writing. The one area in which participants rated themselves much lower than observers involved their classroom management practices.

There are many possible explanations for these discrepancies. Some of these are purely methodological, and will be addressed in the limitations section. Nonetheless, prior research provides support for the idea that teachers may overestimate their knowledge and skills. Thus,

the discrepancies between self and observer ratings are likely to reflect true differences rather than simply artifacts of the instruments used in the present study.

Previous research has demonstrated that early childhood educators often lack the appropriate knowledge of various precursor skills for effective instruction of early language and literacy development in children. For example, Phillips et al. (2008) stated, "...many preschool instructors do not yet have a strong grasp of the developmental trajectory of phonological awareness nor of how to incorporate effective support and instruction into a developmentally appropriate teaching plan" (p. 3). Instruction that is focused on teaching children to be able to perform phonological awareness tasks leads to increased phonological awareness skills and increased literacy skills (Shanahan & Lonigan, 2013). The phonological awareness item yielded the largest self-observer discrepancy out of all items. Key descriptors on the phonological awareness item from the ELLCO Pre-K look for teachers to engage children in a variety of interactions that promote phonological awareness, such as rhyming games, alliterations, and activities that have children segment words into syllables. Teachers should build awareness of sound during formal (e.g., group activity) and informal (e.g., while waiting in line) situations. Teachers should also use appropriate terms that describe their instruction of phonological awareness (e.g., rhyming, syllable, initial sound). It is possible that in the current study participants lacked the knowledge or were unaware of the extent to which phonological awareness should be fostered in early childhood classrooms.

On the ELLCO Pre-K, observers are provided an entire page to record pertinent evidence that supports the level of rating given to each item. The following excerpt was taken from an observer's list of evidence of the phonological awareness item for one of the participating educators: "No phonological awareness instruction or terms were observed during circle time or

during the formal book reading session.” For another participant, an observer recorded, “Although teacher is sounding out the first letter of a child’s name,” (such as buh buh Brittany), “the term initial sound is not used to describe this instruction.” For another participant, “Absolutely no phonological awareness terms were used during the observation period.” Again noted for another educator, “Teachers had students clap the syllables in their names during circle time. Phonological awareness instruction and activities did not occur outside of circle time.”

The writing and print environment is also essential for early language and literacy development. According to Shanahan and Lonigan (2013), children’s early writing skills are moderately strong predictors of later literacy skills. Prior research has demonstrated the positive effects of emergent writing on children’s acquisition of alphabetic knowledge. Thus, activities that encourage writing in preschool children enhance overall emergent literacy (Neuman & Dickinson, 2003). Children’s print knowledge is important for developing abilities for word decoding, reading comprehension, and spelling, as well as oral language and later literacy skills (Shanahan & Lonigan, 2013). Knowledge about print concepts has been found to be a moderate predictor of later reading ability and supports the acquisition of reading. In addition, children’s interaction with environmental print is important for the acquisition of print awareness (Pullen & Justice, 2003). It is suggested that teachers draw children’s attention to print in various situations, such as during group shared reading activities, dramatic play, in the natural environment, and during explicit instruction that focuses on print concepts (Justice, 2006). Mol and Bus (2011) reported moderate to strong correlations between print exposure and reading, reading comprehension, and spelling outcomes in preschool children. In regards to teachers’ knowledge about print awareness, scores on pre-tests about print awareness given to 152 early childhood educators resulted in scores of only 57.63% (Sandefur et al., 2011).

Key indicators on the ELLCO Pre-K environmental print item suggest that teachers actively and purposefully use environmental print in various situations and for various reasons. Children should use existing and create their own environmental print and teachers should integrate it into their daily routines. An observer noted the following about the environmental print in one of the classrooms: “Little evidence that environmental print is used in routines throughout the day.” Evidence of environmental print about another classroom was recorded as, “teacher only occasionally draws children’s attention to environmental print, such as the calendar and names on cubbies.”

The items pertaining to support for children’s writing and the writing environment look for evidence of planned and spontaneous teacher support, motivation for children to write in various situations, for teachers to serve as models and display their own writing, and that children write as part of daily routines (such as daily sign-in sheets) as well as during unplanned activities (such as writing prescriptions in the pretend doctor’s office). Classrooms should have a variety of writing materials throughout the classroom and in a separate writing center. Teachers should display multiple examples of writing around the classroom (e.g. children’s writing, teacher’s writing, class-generated books, children’s dictated stories) in order to demonstrate the numerous purposes of writing and communication. In the current study, one observer noted a lack of children’s writing displayed on walls or in children’s portfolios. Another classroom had evidence recorded that although there was a writing center available, children were not encouraged to choose that center during free time and writing was not observed as part of daily routines. One observer noted that implementation of writing was focused only on letter formation in which all children practiced the same letter at the same time.



In a review of three related studies examining classroom quality and children's development, Dickinson and Sprague (2003) discussed the importance of vocabulary use by teachers and their instruction of word meanings. In the preschool classrooms they examined, intentional vocabulary teaching was rare in the observed intervals of mealtime and free-play. Many teachers were never observed introducing new vocabulary words or meanings. Preschool classroom vocabulary environment, quality of teachers' talk, and curriculum quality predicted 49% of variance in vocabulary and early literacy scores in kindergarten. As previously mentioned, quality of the language and literacy environment as measured by the ELLCO Toolkit predicted 80% of between-classroom variance in children's vocabulary measures (Smith et al., 2008a). Vocabulary is very important in the preschool years, as by the age of 6, the average child comprehends around 14,000 words (Neuman & Dickinson, 2003). Children's vocabulary knowledge has shown high correlations with phonological awareness skills and is an important precursor to reading comprehension (Shanahan & Lonigan, 2013).

The ELLCO Pre-K indicates that new and challenging words should be introduced, discussed, and integrated in ongoing classroom activities. Efforts should be made to elucidate appropriate meanings of words considering the ages of children in the classroom. Teachers might encourage children to arrive at their own definitions and understandings of words to further promote vocabulary development. Also, it is suggested that teachers should model challenging language, acknowledge children's own experimentation, and show enthusiasm for new words. In the present study, one observer recorded that the classroom schedule indicated a specific time set aside for vocabulary; however, vocabulary use was not integrated into other activities, circle, or free-play. In another classroom, the observer noted that a difficult word arose during group story time but the teacher passed over the word without explaining its meaning.

The quality of and approach to book reading can have significant effects on children's language development. One approach, called dialogic reading, involves using certain techniques to create an interactive dialogue between the adult and child. The reader might make a statement and leave off the final word for the child to complete, ask open-ended and recall questions, and makes connections between the book's words or story to the child's own experiences (Shanahan & Lonigan, 2013). Wasik and Bond (2001) found this type of interactive reading to have positive benefits on children's language development. Children in the dialogic book reading intervention group scored significantly better as compared to children in the control group on a measure of vocabulary. Whitehurst et al. (1994) also reported significant effects of interactive reading where children in a reading intervention group outperformed the control group on later measures of expressive vocabulary. In a meta-analysis examining the effects of early book reading on child outcomes, early book reading moderately predicted children's reading skills (Neuman & Dickinson, 2003). Storybook reading promotes new vocabulary and linguistic structures, allows children to partake in vocabulary-rich interactions, and facilitates the focus of attention to more complex language functions (Justice, 2006). Sandefur et al. (2011) reported one area in which teachers rated themselves low in their use of strategies was in relation to the support of book concepts. Also, a pre-test measure of book awareness resulted in a mean score of just 59.07%.

Specific indicators on the books for learning item on the ELLCO Pre-K look for evidence of children using books independently and with teacher guidance and looks for teachers to consistently use books for a variety of purposes (e.g. enjoyment, solving problems, learning to read). Books that relate to the topic under study should be placed strategically in interest areas other than just the book center. In regards to quality of book reading, teachers should attend to the text, pictures, and ideas of the book being read and encourage children to actively participate.

Teachers should have expressive and fluent reading skills and should be familiar with the book's content. Questions and comments posed by the teacher should further children's comprehension of the story. Evidence recorded by observers in the present study shows that in many participating classrooms, books were not provided outside of the book center and if they were, they did not relate to the topic or theme under study. One observer recorded the following: "Teacher did not attend to features of the book other than reading the text, did not pose questions throughout the book, and did not summarize or ask questions at the end of the book." Another observer recorded that there was limited independent use of books during the observation period, even during free-play.

The recorded qualitative evidence provided by the reliable observers for the current study allows further insight into why some participants were given ratings of basic, inadequate, and deficient on many of the ELLCO Pre-K items. Although participants are rating their practices and classroom environment on similar dimensions based upon the ELLCO Pre-K items, it is possible that participants have different standards for or lack knowledge about what encompasses a high quality literacy and language classroom. For example, educators might believe that counting syllables or discussing rhyming words a few times a week is sufficient for promoting phonological awareness and thus rate themselves higher in that area on the self-rating scale. Educators might truly believe that the nature and frequency of the provided instructional activities they implement are appropriate. Unfortunately, this study did not ask participants to rate the frequency at which instructional strategies were implemented.

## **Relations among Observer Ratings, Self-Ratings and Teacher Characteristics**

Most of the reported teacher characteristics did not significantly relate to or predict observers' ratings on the ELLCO Pre-K or participants' self-ratings on the ELLSS. Participants' education level was significantly correlated with self-rating scores on the Print and Early Writing section and the number of times they had been observed previously was significantly related to self-rating scores on the Classroom Structure section. Contrary to prior research, education level was not related to ratings of quality. Burchinal, Cryer, Clifford, and Howes (2002) found that early childhood educators with a Bachelor's degree were rated higher in global classroom quality. However, evidence is mixed in relation to teachers' education level and rated classroom quality. One study found that that teachers' education is related to gains in children's math skills but not to classroom quality or other academic gains (Early et al., 2006).

## **Participants with Multiple Observations**

Results revealed that mean observation ratings on the General Classroom Environment subscale, as measured by the ELLCO Pre-K, were significantly different across time. Nine participants had a total of five observations since Fall 2011. Surprisingly, the lowest mean rating on this subscale was given to the subsample of participants at a more recent observation (Spring 2013). Mean observation ratings on the Language and Literacy subscale did not show significant differences across time. Although not significantly different, the lowest mean observational rating was again given at the most recent observation (Fall 2013). For the Language and Literacy subscale, mean scores have remained relatively similar across time. As previously mentioned, these teachers are with childcare centers that participate in a program that provides consultation, data collection, and professional development opportunities. ELLCO Pre-K observations with

the program began in Fall 2011 and classrooms are observed twice annually (once in the fall and once in the spring).

For the teachers that participate in the program that has been conducting these observations since Fall 2011, the directors at their centers receive the results and written supporting evidence of the ELLCO Pre-K observations. It is not entirely known if teachers also receive the results and feedback, but it is recommended to the directors to do so and many have expressed that they do. One would expect that written feedback from observers through their directors would lead to possible improvement, especially in areas that were rated low. One possible confound in assessing scores across time is that observers have changed across time and thus this might lead to observer bias. However, all observers are appropriately trained and deemed reliable once reliability is reached after training.

Comparing those participants with five observations to those with only one, teachers with multiple observations were rated significantly higher by observers on the Classroom Structure section. Classroom structure was a strong focus of the professional development these teachers received initially. However more recently, they have been receiving professional development in the areas of instructional support and teacher-child interactions; those efforts do not appear to be reflected in their ELLCO Pre-K scores at this point in time.

## **Limitations**

Although the present study contributes to the literature on assessment of early childhood educators' of teaching practices and classroom environments, some limitations must be considered when interpreting results and drawing conclusions. First, the instrument used by observers and the instrument given to participants to rate their own practices and classroom

environment were not identical. The ELLCO Pre-K, used by observers, is a proprietary and reliable instrument that has been used in a multitude of studies examining quality of teaching practices and the classroom environment. As mentioned, this instrument's psychometric properties show that it is reliable with high internal consistency measurements of the subscales and sections and moderate to high item-total correlations. Psychometric properties also demonstrate that the ELLCO Pre-K is also stable and sensitive to intervention or professional development programs provided to teachers. The ELLCO Pre-K has also been shown successful at predicting child outcomes related to early literacy development. The ELLSS, completed by participants, was created on the basis of the clearly defined indicators from each of the 19 items provided on the ELLCO Pre-K. The 19 items on the ELLCO Pre-K each measure a particular dimension, such as the early writing environment. However, there are several provided indicators that represent what a teacher should be practicing or what the classroom environment should encompass in order to warrant a particular rating. Because each of the 19 items includes numerous indicators, these indicators were separated to create a total of 48 items on the ELLSS. The 19 items on the ELLCO Pre-K were divided into 48 items on the ELLSS to improve teacher comprehension. Items from the ELLCO Pre-K were reworded for the ELLSS in order to create an appropriate reading level. The ELLCO Pre-K is most often used by professionals and trained researchers and thus items might not be understood by all individuals. In future research, observers could be asked to rate teachers on all 48 individual items, or teachers could be asked to assess themselves on the 19 ELLCO Pre-K items.

The intercorrelations among the five sections and two subscales of the ELLSS were relatively high, providing evidence for the predominance of common method variance. The majority of participants rated themselves on the higher end of the 1-5 Likert scale on most of the

items, creating a restriction of range and ceiling effect. Therefore, interpretation of the high intercorrelations of the ELLSS must be made with caution.

Although both instruments used a Likert scale of 1 to 5, the descriptive word used for each level was not the same. For the ELLCO Pre-K, rating levels were deficient (1), inadequate (2), basic (3), strong (4), and exemplary (5); ELLSS rating levels were described as strongly disagree (1), disagree (2), neither disagree or agree (3), agree (4), and strongly agree (5). Items on the ELLSS were worded in first person so that participants could rate whether they agreed that the specific practice or environmental support is implemented in their classroom. This warranted the use of the agreement scale on the ELLSS. Also, as noted earlier, the meanings of the descriptors used for the rating scale on the ELLCO Pre-K might not have been easily comprehended by the teachers, so the language was simplified for the self-rating.

An additional limitation of the current study is the sample size. Specifically, the sample size of 34 participants is insufficient for developing a new instrument. In future research, the ELLSS should be given to a much larger sample in order to fully examine its psychometric properties. Aside from developing a new instrument, a sample size of 34 participants is acceptable in examining differences amongst individuals in their scores on various measures. “Sample sizes smaller than 30 have frequently been considered acceptable in psychology” (Rosenthal & Rosnow, 2008, p. 385). Previous research on the quality of early childhood educators has used similar sample sizes to the current study. For example, Jackson et al. (2006) examined 39 teachers, Cunningham (2010) included 24 teachers, Guo et al. (2012) assessed 30 teachers, and Cunningham et al. (2009) examined 20 teachers. However, a larger sample size should be used in future research to increase power and thus possibly detect existing relationships among variables; the lack of significant correlations found in the current study

could be due to low power. In order to detect significant correlations using a moderate power of .50 and with the current sample size of 34, the effect size correlation using  $r$  would need to reach around .35.

Using a scale with few response categories often leads to scores that have little variance, thus limiting the magnitude of correlations with other scales (Preston & Colman, 2000). This restriction of range limitation should be taken into account for the current study because the ELLSS and ELLCO Pre-K both have five response categories. It is possible that restriction of range affected the correlations observed. Although fewer response categories are often quicker and more convenient, more response categories allow participants to more adequately express their agreement or feelings (Preston & Colman, 2000). For most of the items on the ELLSS, the majority of participants (88-100%) rated the statements with a 4 or 5. Fifteen items were rated as 4 or 5 by all participants, 28 items were rated as 4 or 5 by 88-97% of participants, and 5 items were rated as 4 or 5 by 71-85% of participants. This further demonstrates a potential ceiling effect in that most participants rated themselves on the high end of the scale on the ELLSS. However, given that the ELLCO Pre-K uses a 5-point scale, the ELLSS was constructed in a similar fashion.



## CHAPTER V

### CONCLUSION

The findings of the current study suggest that there is little correspondence between how early childhood educators view their own language and literacy related instructional practices and classroom environment and how observers view them. The instruments used by participants (ELLSS) and observers (ELLCO Pre-K) both measured dimensions related to organization and contents of the classroom, classroom management practices, roles of adults in the classroom, curriculum approaches, recognition of diversity, allowing opportunities for child choice, use of extended conversations, promotion of vocabulary and phonological awareness, encouragement of individual opinions, quality of and approaches to book reading, use of books for learning, reference to environmental print, support for children's writing, and the early writing environment. There were no significant correlations between observers' ratings and participants' self-ratings on the sections or subscales of the ELLCO Pre-K and ELLSS.

Furthermore, there were significant discrepancies between observer and teacher self-ratings on some dimensions. Analyses revealed that significant differences in mean ratings existed between observers and participants on the *Language and Literacy* subscale, where participants rated themselves higher than did observers. Significant differences in mean ratings between observers and participants were not found for the *General Classroom Environment* subscale. When analyzed by sections, no differences were observed on the Curriculum section but ratings did significantly differ for Classroom Structure, Language Environment, Books and

Book Reading, and print and Early Writing. Observers gave higher ratings on the Classroom Structure section as compared to participants, but lower ratings than participants on the remaining sections.

The Early Language and Literacy Self-Rating Survey (ELLSS) was created for the purposes of the current study. Although the sample size was not sufficient to fully examine the psychometric properties of this instrument, initial analyses yielded promising results. Reliability coefficients were high for both section and subscale scores and intercorrelations between subscales were in keeping with those observed on the ELLCO Pre-K.

Teacher demographic variables, including age, education, years of experience, number of training hours in the past year, prior experience with ELLCO Pre-K observations and number of children in the classroom were examined in relation to section and subscale scores on the ELLSS and ELLCO Pre-K. No significant relationships were found between observers' ratings and teacher demographics. Teachers' education level and total number of prior observations were significantly correlated to the self-ratings scores on the Print and Early Writing section and Classroom Structure section, respectively. Teachers with a higher education level and those with more prior observations rated themselves significantly higher on these sections. In addition, teachers with more years of experience rated themselves higher on the Classroom Structure and Books and Book Reading sections. Teachers with more reported training hours over the past year rated themselves significantly higher on the Classroom Structure and Print and Early Writing sections.

Due to their participation in a program that provides consultation, data collection, and professional development opportunities, nine teachers have been observed using the ELLCO Pre-K since Fall 2011, resulting in five total observations. Scores on the observations were examined

across time. Results indicated that significant differences existed in scores on the *General Classroom Environment* but not on the *Language and Literacy* subscale across time. However, the changes observed over time were not the steady improvements predicted or desired. Mean observation ratings on the *Language and Literacy* subscale were relatively similar across time and did not significantly differ, but the lowest mean rating was given at the fifth and most recent observation. At least for this subsample of teachers, observation scores related to the early language and literacy environment are not progressively increasing with multiple observations, even with feedback and results provided to their directors.

To examine the possible influence of prior observations and feedback, teachers with five observations were compared to teachers with only one observation. Teachers with one observation received a significantly lower rating from observers on the Classroom Structure section of the ELLCO Pre-K. Also, teachers with five observations rated themselves significantly higher on the ELLSS Classroom Structure section in comparison to teachers who had been observed only once. Of course, teacher experience is somewhat confounded with the number of prior observations.

Research has indicated that quality of early childhood education classrooms varies immensely (Meyer et al., 1993; Pianta et al., 2002). High quality classrooms are essential for children's emergent literacy skills and later school success. Preschool classrooms rated as higher quality have been shown to result in more advanced skills in receptive language ability, math ability, cognitive and attention skills, sociability, and fewer problem behaviors, as measured in kindergarten (Peisner-Feinberg et al., 2001). The quality of language and literacy instruction has been reported to be low in many preschool classrooms (Justice et al., 2008). The literacy environment as measured by the ELLCO was significantly correlated with children's literacy

development (Cunningham, 2010). Research has also shown that teachers often lack the appropriate knowledge needed for effective instruction to foster children's literacy development (Al-Hazza et al., 2008; Cunningham et al., 2004; Cunningham et al., 2009; Moats, 1994; Shedd, 2011).

A number of professional development classes and intervention programs have shown their benefit in improving classroom quality, instructional quality, and children's outcomes (Dickinson & McCabe, 2001; Jackson et al., 2006; Lundberg et al., 1998; Sandefur et al., 2011; Wasik & Bond, 2001; Wasik et al., 2006). In most of these studies, instructional and/or environmental quality was examined by observation and educators were provided feedback or training and improvement of quality resulted on later observations. Self-assessment is also important for effective learning and acknowledgement of strengths and weaknesses (Boud & Falchikov, 1989). Valuable support can be provided by the use of self-assessment for both teaching and learning (Adams & King, 1995). The current study provided insight into how early childhood educators might view themselves differently than observers in relation to literacy and language practices and the classroom environment. By examining the largest discrepancies between observers and educators, the lowest scores given by observers, participants' lowest self-rating scores, and qualitative data in observers' records, professional development providers would have a more complete picture of the areas to target in training interventions with early childhood educators.

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APPENDIX A  
MEASURES

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(Unique Identifier)

### EARLY LITERACY AND LANGUAGE SELF-RATING SURVEY

Please carefully read each item below and answer as honestly as possible with the one number that best represents your practices or classroom environment. We will NOT try to match your answers to your name. Your survey answers will not be shared with your supervisor or anyone outside the research team and will remain completely confidential. Thank you!

Please rate each question using the following coding scale:

- 1—Strongly disagree
- 2—Disagree
- 3—Neither agree or disagree
- 4—Agree
- 5—Strongly agree

Please fill in the blank with the number from above that applies to you:

(Organization of the Classroom)

\_\_\_\_\_ 1. I organize my classroom so that centers are a central focus to children's experiences throughout the day.

\_\_\_\_\_ 2. The furnishings in my classroom are appropriately sized and comfortable for the age range in my classroom and furnishings are arranged to invite children into various learning areas.

(Contents of the Classroom)

\_\_\_\_\_ 3. Materials in my classroom are organized into related groups that suggest specific purposes to children. (For example, there is a magnifying glass in the science center.)

Please rate each question using the following coding scale:

- 1—Strongly disagree
- 2—Disagree
- 3—Neither agree or disagree
- 4—Agree
- 5—Strongly agree

\_\_\_\_\_ 4. Child-generated work is displayed effectively around my room and reminds the children of their contributions during lessons and activities.

(Classroom Management)

\_\_\_\_\_ 5. I consistently communicate my expectations and rules in various ways using a positive approach.

\_\_\_\_\_ 6. Children in my classroom move smoothly throughout the day with few conflicts and do not need to be constantly reminded of rules and routines.

\_\_\_\_\_ 7. I use positive guidance strategies (teaching more appropriate behaviors, ignoring inappropriate behaviors, redirecting, etc.) instead of punishment.

(Personnel)

\_\_\_\_\_ 8. If there are multiple adults in my classroom, each adult has a specific purpose and role but all adults focus on the needs of the children.

\_\_\_\_\_ 9. If multiple adults are in my classroom, we interact respectfully with one another.

(Approaches to Curriculum)

\_\_\_\_\_ 10. I use materials and plan activities that relate to a theme that is meaningful to the children in my classroom.

\_\_\_\_\_ 11. I acknowledge and value each child's comments and questions during lessons and activities.

\_\_\_\_\_ 12. When appropriate, I give children in my classroom opportunities to use their language and literacy skills.

Please rate each question using the following coding scale:

- 1—Strongly disagree
- 2—Disagree
- 3—Neither agree or disagree
- 4—Agree
- 5—Strongly agree

(Opportunities for Child Choice and Initiative)

\_\_\_\_\_ 13. My daily schedule is flexible and allows for child self-directed activities throughout the day.

\_\_\_\_\_ 14. I set up experiences that further allow children to independently engage in learning.

(Recognizing Diversity in the Classroom)

\_\_\_\_\_ 15. I make an effort to learn information from the children's homes and communities and then use this information during activities and lessons. (For example, you may talk about the various celebrations that occur for children in your classroom)

\_\_\_\_\_ 16. I use children's prior knowledge or personal interests as a basis for planning activities in my classroom.

(Discourse Climate)

\_\_\_\_\_ 17. I allow all children, regardless of differences in culture, gender, race or language, to express their individual opinions and ideas.

\_\_\_\_\_ 18. I encourage children to listen and respond to one another.

(Opportunities for Extended Conversations)

\_\_\_\_\_ 19. I create a variety of opportunities for children to interact in individual, small-group, and large-group conversations.

\_\_\_\_\_ 20. I initiate conversations that maximize talk and build on oral language skills. (Example: a discussion about how the class will create their own post office, including brainstorming and listing the supplies they would need)

Please rate each question using the following coding scale:

- 1—Strongly disagree
- 2—Disagree
- 3—Neither agree or disagree
- 4—Agree
- 5—Strongly agree

\_\_\_\_\_ 21. I ask open-ended questions to children (ones you don't already know the answer to and that require more than a one- or two-word answer) that will encourage them to talk about their thinking. For example, "Tell me about our day at the zoo" instead of "What color was the flamingo?"

(Efforts to Build Vocabulary)

\_\_\_\_\_ 22. I talk to the children in my classroom using some words slightly beyond their understanding to broaden their knowledge of words and sentence structure.

\_\_\_\_\_ 23. I give age-appropriate definitions of words and show excitement when using challenging language.

(Phonological Awareness)

\_\_\_\_\_ 24. I use terms such as "rhyming", "initial sounds", and "syllable", during phonological awareness activities.

\_\_\_\_\_ 25. I use song and word games to isolate sounds in words. (Example: "What is the sound that begins these words?: chin, chicken, and cheek? Ch is the sound that begins these words.")

\_\_\_\_\_ 26. I help children connect letters and sounds by reading and talking about alphabet books. (For example, "Look at all the things on this page that begin with the letter A. There's an Apple, there's an Ant, there's an Alligator. They all begin with the /a/ sound.")

(Organization of Book Area)

\_\_\_\_\_ 27. My book center is separate from other centers and looks inviting and comfortable.

Please rate each question using the following coding scale:

- 1—Strongly disagree
- 2—Disagree
- 3—Neither agree or disagree
- 4—Agree
- 5—Strongly agree

\_\_\_\_\_ 28. I provide many opportunities for children to freely and independently access books from the book center.

(Characteristics of Books)

\_\_\_\_\_ 29. I provide books with a range of topics and genres (such as friendship, doctor visits, science, colors, rhyming books, alphabet).

\_\_\_\_\_ 30. I provide books with various examples of characters and family structures (such as differences in gender, race, ability, language).

(Books for Learning)

\_\_\_\_\_ 31. I see children in my classroom using books independently and consistently.

\_\_\_\_\_ 32. I provide books that are related to the current lesson and purposefully place them around the classroom for children to use in specific centers (recipe books in the kitchen center, construction books in the block area, etc.).

(Approach to Book Reading)

\_\_\_\_\_ 33. I read a book or books everyday to the children in my classroom in a group setting.

\_\_\_\_\_ 34. I read spontaneously with children throughout the day in multiple settings. (This might be one-on-one or in small groups and isn't always intentionally planned.)

(Quality of Book Reading)

\_\_\_\_\_ 35. I am familiar with the book I choose to read in a group setting and plan questions and comments to bring up to the children to further engage them in the story.

Please rate each question using the following coding scale:

- 1—Strongly disagree
- 2—Disagree
- 3—Neither agree or disagree
- 4—Agree
- 5—Strongly agree

\_\_\_\_\_ 36. I teach about the physical elements of books, such as the author, cover, title page, page numbers, illustrator, print vs. pictures, etc.

\_\_\_\_\_ 37. While reading, I use an articulate and expressive voice to help children understand the characters and content of the story.

(Early Writing Environment)

\_\_\_\_\_ 38. I provide multiple opportunities to motivate the children in my classroom to use their writing skills.

\_\_\_\_\_ 39. I provide a variety of writing materials and tools throughout my classroom and have a designated writing center. (Examples: Paper to take messages by the play phone, pads for taking orders in the kitchen/restaurant play area)

\_\_\_\_\_ 40. There are multiple examples of writing (such as children's writing, posters, children's dictated stories, or class-generated books) throughout my classroom.

(Support for Children's Writing)

\_\_\_\_\_ 41. I support children's writing efforts in multiple ways (such as taking dictation, making charts, writing stories generated by children).

\_\_\_\_\_ 42. I support children's understanding of the characteristics of written language (for example, we read from left to right and top to bottom, there are spaces between words, letters show up in predictable patterns, etc.)

\_\_\_\_\_ 43. Children in my classroom write throughout the day as a part of routines I have organized (such as daily sign-ins or labeling art work).

\_\_\_\_\_ 44. I provide opportunities for spontaneous writing throughout the day (such as writing prescriptions in a doctor's office during dramatic play or making a grocery list).



Please rate each question using the following coding scale:

- 1—Strongly disagree
- 2—Disagree
- 3—Neither agree or disagree
- 4—Agree
- 5—Strongly agree

(Environmental Print)

\_\_\_\_\_ 45. I label the classroom environment. (Examples: label bins of toys, label different centers, class schedule, the calendar, and important objects children need to notice)

\_\_\_\_\_ 46. I use environmental print (product labels, magazine pictures, signs, teacher-made charts, etc.) in my teaching to help children learn letters, sounds, and words.

\_\_\_\_\_ 47. I use children's own ideas and stories that I write for them in large print on chart paper.

\_\_\_\_\_ 48. Environmental print that I have created displays the correct use of upper- and lower-case letters, spelling, and spacing between words.

Unique Identifier \_\_\_\_\_

### DEMOGRAPHIC QUESTIONNAIRE

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

Ages of children in your room: \_\_\_\_\_

Number of children in your classroom: \_\_\_\_\_

Your Age: \_\_\_\_\_ years                      Your Race: \_\_\_\_\_

Gender: Female      or      Male

Years of experience as an early childhood educator: \_\_\_\_\_ years

Number of years working with current age group: \_\_\_\_\_ years

Number of years spent working for this program: \_\_\_\_\_ years

How much early childhood training have you had in the past year? \_\_\_\_\_ hours

Specify the type of training and topics covered: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Your educational background (check highest level of education):

\_\_\_\_ Some High School

\_\_\_\_ High School or GED

\_\_\_\_ Child Development Associate

\_\_\_\_ Some College                      Specify major: \_\_\_\_\_

\_\_\_\_ Associates Degree                      Specify major: \_\_\_\_\_

\_\_\_\_ Bachelor's Degree                      Specify major: \_\_\_\_\_

\_\_\_\_ Graduate Degree                      Specify major: \_\_\_\_\_

APPENDIX B  
INSTITUTIONAL REVIEW BOARD APPROVAL

## MEMORANDUM

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TO: Ms. Kayla Polk **IRB # 13-120**

FROM: Lindsay Pardue, Director of Research Integrity  
Dr. Bart Weathington, IRB Committee Chair

DATE: September 9, 2013

SUBJECT: IRB #: 13-120: Language and Literacy Supports in Early Childhood Classrooms:  
Comparing Ratings of Teachers and Observers

The IRB Committee Chair has reviewed and approved your application and assigned you the IRB number listed above. You must include the following approval statement on research materials seen by participants and used in research reports:

***The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project # Error! Reference source not found. Error! Reference source not found..***

Please remember that you must complete a Certification for Changes, Annual Review, or Project Termination/Completion Form when the project is completed or provide an annual report if the project takes over one year to complete. The IRB Committee will make every effort to remind you prior to your anniversary date; however, it is your responsibility to ensure that this additional step is satisfied.

Please remember to contact the IRB Committee immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB Committee immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page <http://www.utc.edu/irb> or email [instrb@utc.edu](mailto:instrb@utc.edu)

Best wishes for a successful research project.

## VITA

Kayla Polk was born in Orange Park, Florida and later moved to Chattanooga, Tennessee. Kayla completed a BS in Psychology with a minor in Marine Science at Jacksonville University in Jacksonville, Florida in 2008. After graduation she returned to Chattanooga to attend the University of Tennessee at Chattanooga to complete her master's degree in research psychology under the supervision of Dr. Amye Warren. Her interests include developmental psychology and statistical methods. Kayla will earn her Master of Science in Research Psychology in December 2013 and currently works as a Graduate Assistant at United Way of Greater Chattanooga. Kayla looks forward to moving to the west coast following graduation to pursue a career in research psychology and to continue her education in a doctoral program.