

# EMERGENT MOTIVATION FOR READING IN PRE-KINDERGARTEN CHILDREN

by

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(Under the Direction of Paula Schwanenflugel)

## ABSTRACT

This study aimed to develop and validate a measure of emergent reading motivation designed for pre-kindergarten children, called the Emergent Reading Motivation Scale (ERMS). The development of the ERMS was to overcome the limitation that existing reading motivation measures are not developmentally appropriate for young children. 56 native-English speaking children who were enrolled in a pre-kindergarten program participated in the study. The ERMS had 17 items, and for each item, two puppets made contrasting statements regarding emergent reading motivation which were drawn from three motivational constructs: reading self-concept, learning goal and performance goal for reading. The children selected the puppet that was most like them. The children were also administered two subtests from the Phonological Awareness Literacy Screening for preschool (PALS-PreK). Results suggested that the ERMS is an age-appropriate reading motivation measure for pre-kindergarten children and has a three-factor structure even though its internal consistency is moderate and is of limited predictive power of emergent literacy skills.

INDEX WORDS: pre-kindergarten children, emergent reading motivation, reading self-concept, reading learning goal, reading performance goal

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## DEDICATION

To my parents who firmly believe that I am able to become the person I want to be.

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## **CHAPTER 1**

### **Literature Review**

It is not difficult to understand why reading motivation is such a widely discussed topic by educators and researchers given its important role in affecting reading behaviors and reading achievement. As with many things, if a student does not want to engage with print and avoids practice, learning to read well will take longer, if occurs to a high level at all. In contrast, children with a strong reading motivation are more willing to get engaged into reading activities and show more interest in approaching reading materials. They choose their own books, are willing to use efficient reading strategies and also more likely to be life-long readers.

Reading motivation is a key factor in shaping reading behaviors, such as the effort and time children devote to reading-related activities and the way they select reading materials. Different reading motivation constructs have been found to have different directions and magnitude in their associations with reading behaviors. Generally speaking, autonomous and intrinsic reading motivation tend to have more positive effects on reading engagement and reading frequency than controlled and external reading motivation (De Naeghel, Van Keer, Vansteenkiste, & Rosseel, 2012). Schiefele and his colleagues (2012) synthesized the research findings for the past 20 years on the relationships between reading motivation and reading behavior, and concluded that intrinsic motivation contributed a large proportion of positive reading behavior, especially in relation to amount of reading for enjoyment, whereas external motivation has smaller and even negative effects on reading behavior. In addition, research has also demonstrated that motivated readers tend to approach more challenging reading materials, be more persistent when reading is

difficult, cognitively process materials more deeply, and show higher level of reading comprehension (Tobias, 1994; Taylor, Frye, & Maruyama, 1990; Smith-Burke, 1989).

The impacts of reading motivation on reading achievement have also been illustrated by previous research. Multiple constructs of reading motivation make the relationships not as simple as researchers have commonly thought. In the attempt to better predict reading achievement with motivations, Guthrie and Coddington (2009) found that when motivation constructs derived from different theories (e.g., self-determination, social cognitive theory and social goal theory) were included in the prediction model, more variance in reading achievement could be explained than when motivation constructs were derived from a single theory. Further, given that reading achievement can also be measured by multiple reading skills, Ho and Guthrie (2013) examined the multivariate relationships between sets of motivations, for reading either information texts or literacy texts, and sets of reading skills. Results showed that most of the negative reading motivations (e.g., devalue, perceived difficulty, and peer devalue) were more strongly associated with reading achievement (e.g., simple passage comprehension, reading fluency, etc.) than affirming motivations (e.g., value, efficacy, peer value), regardless of type of texts, and all the negative motivations had adverse effects on reading achievement. In addition, the relationship between reading motivation and reading skills appear to be reciprocal over time. Morgan and Fuchs (2007) reviewed 15 studies that examined the relationships between reading skills and reading motivation (competency beliefs and goal orientations). Direct evidence was found to support a reciprocal relationship in 10 out of 11 studies. However, few researchers controlled the effect of IQ and socioeconomic status which were shown to have an impact on the reading skill and motivation relationship. Thus, a causal relationship can hardly be concluded yet.

However, most of the existing research on reading motivation has been conducted with children who are already attending school. Few studies paid attention to pre-kindergarten children and they were all limited to children's literacy experience at home instead of in the pre-kindergarten classroom. The lack of research might be due to the assumption that pre-kindergarteners have limited reading-related experiences at the stage and limited feelings or attitudes toward reading. It is then not surprising that a standard reading motivation instrument, by either self-report or informants' rating, designed particularly for pre-kindergarten children does not exist to my knowledge. However, attending pre-kindergarten is now normative among American preschool children and may have increased their exposure to emergent reading experiences. Developing a measure of emergent reading motivation for pre-kindergarten children appears to be timely.

The current study thus aimed to construct and validate a self-report instrument, Emergent Reading Motivation Scale (ERMS), to screen pre-kindergarteners' emergent reading motivation, an embryonic view about reading in pre-kindergarten class context. Early literacy activities and standards for pre-kindergarteners' literacy instruction are first examined to determine if measuring their emergent reading motivation is feasible and necessary. Previous studies have showed that multiple motivation theories and constructs can be used to measure reading motivation and, in the current study, I focused on three of them, reading self-concept, reading learning goal and reading performance goal, which prior research has suggested may have potential for predicting young children's emergent literacy skills. Finally, in this chapter I reviewed several self-report self-concept measures designed for preschool children. By evaluating these measures, I could determine well-designed age-appropriate methodologies to be adopted in the construction of the ERMS.

## **Emergent Literacy in Pre-kindergarten Classes**

Most of the existing work on emergent reading motivation has been focused on children who are already attending school. However, early reading behaviors have been found in pre-kindergarten. By 2005, 43 states have constructed specific standards for the performance of children ages 3-5 in language, literacy and mathematics. Georgia's Pre-k Program Content Standards for language and literacy development is an example. By the end of prekindergarten, children are expected to have developed the ability to listen for comprehension and to discriminate sounds in language and to begin writing using pictures, symbols and letters. Pennsylvania Learning Standards for early childhood even require pre-kindergarten children to learn to read independently. It is common to observe that children in a pre-kindergarten class handle books, look at and recognize pictures in books, try to comprehend pictures and stories, babble in imitation of reading or run fingers along printed words. All these behaviors can be viewed as early literacy behaviors (Schickedanz, 1999).

According to Ford's (1992) definition of motivation, reading motivation can be interpreted as components that direct, energize, and regulate an individual's reading-related activity, such as goals, emotions, and personal beliefs. Pre-kindergarten children can then be thought to have emergent feelings and attitudes towards literacy-related activities. Although children in pre-kindergarten classrooms mainly listen to books read by teachers or by audio-recorded CDs, they do interact with written language (usually including illustrations) and develop early concepts concerning its functions and conventions. Moreover, from the viewpoint of Hagtvet (2000), the ability to maintain focused attention on oral language is one component of motivation of obvious relevance to enabling skills in reading. Measuring pre-kindergarten children's reading-related motivation thus seems to be feasible and necessary.

Previous studies have demonstrated that multiple relationships exist between reading motivation, early literacy skills (i.e., phonological awareness and letter knowledge) and subsequent reading achievement. As a summary of the research published prior to 2004, the National Early Literacy Panel reported that phonological awareness measured in both preschool and kindergarten, significantly predicted decoding, spelling, and reading comprehension outcomes measured at the end of kindergarten or later (Lonigan, Schatschneider, Westberg, 2008b). Similar moderate-to-strong predictive relations were also found for alphabet knowledge. With regard to achievement-related motivation, emergent literacy skills (phonological sensitivity and letter-name knowledge) were found to be able to significantly predict positive or negative academic self-concept status at the beginning of schooling (Chapman, Tunmer, & Prochnow, 2000).

However, studies that examined the role of pre-kindergarten children's emergent reading motivation in predicting early literacy skills and subsequent reading achievement are very limited, and most of the relevant studies focused on children's literacy experiences at home rather than in the pre-kindergarten classroom (Baker & Scher, 1997; Hui & Salili, 2008; Scher & Baker, 1994). Another limitation is that most of the studies relied on teachers' or parents' ratings to measure pre-kindergarteners' reading motivation. The validity of informants' ratings on young children's academic behaviors and attitudes is dubious because they might not be always consistent with children's relevant self-reports. For example, Valeski and Stipek (2001) found that teachers' ratings of kindergarteners' reading engagement was negatively correlated with the children's self-perceived competence in literacy ( $r = -.15$ ). In contrast, children's self-perceptions tend to be more informative in predicting their behavior (Measelle, Albrow, Cowan, P & Cowan, C, 1998). Research on pre-kindergarteners' reading motivation needs to expand both in terms of

the content, moving from home to pre-kindergarten class context, and in terms of the methodology, moving from informants' rating to self-report. However, the feasibility of using self-report with pre-kindergarten children needs to be discussed.

### **Reading Self-Concept**

Self-concept is a general term consisting of multiple dimensions. It is used to refer to how individuals think about themselves in terms of a set of characteristics, such as attributes, academic and nonacademic abilities, gender roles and sexuality, racial identity, and many others (Berk, 2008). In an achievement setting, self-concepts of abilities are usually domain-specific self-perceptions that students develop as a result of their experiences in different academic subjects or domains. Marsh, Byrne, and Shavelson (1988) categorized academic ability self-concepts into two major broad dimensions: verbal and mathematical. Wigfield and Karpathian (1991) suggested the need for further differentiation of these subcomponents. The concept of reading ability is assumed to be one of the subcomponents of verbal self-concept. Due to the important role of competence beliefs in studying children's motivation (Eccles, Wigfield & Schiefele, 1998; Wigfield, 1997), reading self-concept has been measured as a motivation construct in several widely-used reading motivation instruments, such as Motivation to Read Profile (Gambrell, Palmer, Codling & Mazzoni, 1996) and Reading Self-Concept Scale (Chapman & Turnner, 1995).

A body of research has examined the complex relationships between reading self-concept and reading achievement. Some of the studies focused on casual relationships between reading self-concept and reading achievement (Park, 2011) and others aimed to investigate potential reciprocal relationships between the two constructs over time (Retelsdorf, Koller & Moller, 2014; Medford & McGeown, 2012). Researchers have paid attention to the development of reading

self-concept for both full-range students or more specifically to the students who consistently experienced reading success or failure (Moller & Pohlmann, 2010). However, most of the research has been conducted with school-age children. How reading self-concept operates in young children in relation to emergent reading skills or achievement has not been fully investigated.

The findings of Chapman and his colleagues' studies on young children's academic self-concept can shed some light on emergent literacy motivation in young children. Chapman and Tunmer (1995) developed and validated the Reading Self-Concept Scale (RSCS) that was used to measure the reading self-concept of children ages 5 to 10 (Children in New Zealand commence school and receive formal reading instruction on or around age 5.) The scale included three components, competency, difficulty and attitude. The Cronbach's alpha of the full scale with 50 items was .84 for kindergarteners. Chapman and Tunmer (1997) also found that the correlation between emergent reading skills (i.e., phoneme deletion task, a sound matching task and letter identification task) and reading self-concept measured by RSCS during the 1st year of schooling was .11 and increased to .21 during the 2nd year. For children who have relatively consistent experiences of either accomplishment or difficulty in reading activities, relationships between emergent reading achievement and self-concept were then assumed to emerge at even an earlier point since frequent achievements and difficulties in learning to read seem to be able to facilitate the development of academic self-concepts that reflect reading success and failure.

To examine the hypothesis that the relationships between reading achievement and academic self-concept developed at an earlier point than had been reported in prior studies with full-range samples of children, Chapman, Tunmer and Prochnow (2000) conducted a longitudinal study with 120 5-year-olds. Specifically, it was predicted that children with



relatively negative academic self-concepts (ASC) as measured by Perception of Ability Scale for Students (PASS; Boersma & Chapman, 1992a) for in five basic areas (reading, spelling, language arts, math, and printing) would perform poorly on reading and have lower reading self-concept compared with children with positive ASCs. The children were categorized into positive ASC and negative ASC groups based on their PASS scores. Reading performance was assessed on the Burt Word Reading Test, New Zealand Revision. Results showed that differences in reading self-concept appeared within the first 2 months of schooling, which did not agree with the earlier studies reporting that children commenced school with optimistic self-perceptions and expectations of academic achievement. It was likely that young children had already developed different reading or reading-related self-concept before they entered school. Furthermore, children with negative ASCs had significantly lower scores than did children with positive ASCs on two of the emergent literacy measures (phonological sensitivity skills and letter-name knowledge) and on the competence and attitude subscales of Reading Self-Concept Scale at the beginning of their schooling than did those with positive ASCs. However, a direct relationship between young children's reading self-concept and emergent literacy skills was not examined in the study.

Somewhat in contrast to the above-mentioned literatures that showed the associations between reading self-concept and reading achievement, there are several studies with young children (kindergarteners and first-grade students) reporting that even though they can make domain specific self-judgments (Valeski & Stipek, 2001; Wilson & Trainin, 2007), kindergarteners' perceptions of competence were not significantly associated with literacy activity engagement or literacy achievement (Valeski & Stipek, 2001). Valeski and Stipek (2001) constructed the Feelings about School (FAS) scale that measures kindergarten children and first-

grade students' perceptions of academic competence in math and literacy (reading), feelings about the teacher and general attitudes toward school. Factor analysis supported the four-dimension structure across age groups, and the Cronbach's alphas for the whole scale were .87 for kindergarteners and .85 for first-graders. Valeski and Stipek found that kindergarteners' perceived competence in literacy was not significantly correlated with their literacy skill as measured by letter/sound identification, word reading, overall reading, writing, oral comprehension and verbal fluency ( $r = .02$ ). Such results left the role of self-concept as a reader in predicting literacy competence in doubt.

However, one of the possible explanations for this result can be that the literacy skills measured in the study were not age-appropriate. Given that the participants were kindergarteners, measuring their emergent literacy skills instead (e.g., letter knowledge, phonological awareness, and print knowledge) would have been more reasonable. Another issue was that the relationship between self-perceived competence in literacy and each of the literacy skills was not examined separately. Instead, the authors averaged the scores of six literacy skills to get a general literacy score for each child. In addition, FAS has only two items that were developed for the perceived competency in literacy dimension, and the reliability for this dimension was only .61. In sum, it is likely that improving the study from the above aspects would lead to a clearer link between kindergarteners' self-perceptions in reading competence and emergent literacy skills. However, it could be also possible that very young children's self-perceptions of competence in literacy are not precise enough yet to direct their literacy skills. Contrary to kindergarten children, first-grade students' performance on literacy assessments in that study significantly predicted their perceptions of competence in literacy in this study.

To measure literacy motivations particularly for kindergarten children, Mata (2011) developed an instrument, Motivation for Reading and Writing Profile, (MRWP) using the Motivation for Reading Scale (MRS) (Scher & Baker, 1997) as a reference. In MRWP, 36 items with 10 items stemming from MRS and 26 items newly developed for the scale were used to assess three motivational constructs including enjoyment, value and self-concept of reading and writing respectively. Psychometric analyses showed good construct validity and internal consistency of the MRWP. Factor analysis was conducted with principal component analysis method with a Varimax rotation and indicated three components (i.e., value, enjoyment, self-concept) for both reading and writing subscales. The Cronbach's alphas were also calculated for each of the three components, ranging from .67 to .75 for reading scales and from .69 to .84 for writing scales. The results demonstrated that kindergarteners can differentiate their self-perceptions of literacy competence well.

A number of limitations existed for this validation study of the MRWP and the instrument then should not be considered as fully validated. The researcher did not examine the relationship between the MRWP and the children's emergent literacy skills or achievement. Further, the mean scores of the MRWP scales were very high, with, for instance, 3.57 Out of 4 for reading self-concept and 3.54 out of 4 for writing self-concept. This might suggest that social desirability affected the way children responded. Moreover, the variances of the MRWP scores were not reported. Therefore, it is doubtful that the scores will prove to be useful predictors of reading and writing competence. On the other hand, the Cronbach's alpha ( $\alpha = .75$ ) and the high factor loadings (.717 to .748) of the self-concept as a reader subscale in the MRWP showed potential to be adapted for measuring pre-kindergarten children's reading self-concept. It, in fact, showed the best psychometric properties of any of the four subscales used in the Mata study.

Reading self-concept as a reading motivation variable plays an important role in predicting reading behavior and achievement. Such a relationship can emerge as early as 5-year-olds (first graders in New Zealand) as shown in Chapman and his colleagues' studies. However, researchers have not paid as much attention to this relationship in preschool children as in school-age children. Even though several instruments have been constructed to measure early elementary graders' reading self-concept and these instruments are inspiring evidence that children as early as kindergarten are able to differentiate their reading self-concept, there is no reason to believe that they are also appropriate for pre-kindergarteners. After all, children at preschool and early school stages are of different levels of cognitive skills and have different reading behaviors. Further, some of the discussed motivation measures for young children need to be fully validated. In sum, constructing a valid reading self-concept measure designed especially for pre-kindergarten children may be possible and is necessary given its potential relationship with emergent literacy achievement.

### **Goal Orientations**

Goal orientations are usually defined as the reasons that people approach and engage in certain activities. They were first applied to academic achievement settings to measure students' motivation for academic tasks. Although researchers hold different opinions on how to best conceptualize goal orientations, a two-dimension structure that includes learning (also called task-mastery or task-involved) goals and performance (also called ego-involved) goals have received the most attention. Based on Dweck's work on goal orientation and implicit perceptions of intelligence (Dweck, Hong & Chiu, 1993; Dweck & Leggett, 1988), learning goals are linked to the belief that competence is a malleable quality that can be improved through making efforts

toward particular goals. Performance goals relate to the belief that competence is an entity, a fixed disposition that does not change.

Learning goals and performance goals can have different effects on achievement behaviors (Dweck, 1986; Elliott & Dweck, 1988; Dweck & Leggett, 1988). For example, children with strong learning goals are usually able to rebound from occasional failure. They interpret outcomes in terms of how much effort that has been exerted and attribute failure to insufficient effort. As a result, high persistency on a task is a typical response pattern to failure within learning goals. In addition, learning goal oriented children may prefer challenging tasks that they believe are opportunities to learn. In contrast, children with strong performance goals usually react negatively to failure. They related outcomes to the judgment of their competence and attribute failure to incompetence. As a result, performance goals lead children to the tendency to give up in the face of setbacks and to select relatively easy tasks that can protect their competence from negative evaluation. However, it is worth to mention that learning and performance goals are neither mutually exclusive nor contradictory as indicated in prior studies (Button, Mathieu, & Zajac, 1996) . It is possible that an individual holds both learning and performance goals simultaneously.

Built upon Dweck's two-dimension structure (learning goals and performance goals), Vandewalle (1997) proposed that performance goals are multi-dimensional and that a distinction can be made between performance-approach goals and performance-avoidant goals. Performance-approach goals indicate the desire to perform better than others and performance-avoidance goals indicate the desire to avoid performing worse than others. Similarly, learning goals can also be divided into learning-approach goal and learning-avoidant goal (Pintrich, 2000) even though such categorization is not widely accepted.

As pointed out by Scheiefele, Schaffner, Moller and Wigfield (2012), limited attention has been paid to applying goal orientation models to reading motivation, which is not consistent with the findings of the above research that goal orientations have significant effects on achievement behaviors. Meece and her colleagues (1988) studied goal orientations of children in grades five through six and found that task-mastery goal oriented students reported more active cognitive engagement measured by the 15 additional items in the Science Activity Questionnaire (SAQ) than ego- and social goal oriented students respectively. Meece and her colleagues (1999) also investigated the relationships between goal orientations and literacy-related assignments. The results showed that the students focused less on performance goals and reported less work avoidance when they were given more opportunities to finish challenging and collaborative assignments. In these studies, the goal orientations were measured by the SAQ, a 4-point Likert type scale including three dimensions, i.e., task mastery goal (to learn something new, understand his/her work and to learn as much as possible), ego/social goal (to impress others and to please the teacher) and work avoidant (to do as little as possible).

In 2001, Meece et al. revised the wording of SAQ to make the questionnaire applicable to language arts activities. They conducted a longitudinal study that examined the stability of students' goal orientations in literacy activities with 432 students from the third to fifth grade. The content of the revised SAQ was still not specific to reading and writing though. Sample items include "I wanted to learn as much as possible", "I wanted others to think I am smart" and "I wish I didn't have to do this assignment". Regardless, the results supported the three-dimensional structure of the goal orientation instrument, which was consistent across grades and learning tasks (simple/complex). Most of the students' responses on goal orientations were found to be consistent across learning tasks within the same academic semester. However, across

semesters of an academic year, significant decreases were found in students' task-mastery goals and performance goals, and the largest change was found in grade four for task-mastery goals and in grade three for performance goals. The students were categorized into different ability groups based on their California Achievement Test (CAT) scores, and the main effect of ability was found on performance goals and work-avoidant goals in Cohort 2. Specifically, students in the lowest ability group scored higher on performance/work-avoidant goal orientation than did the students in the average and high achieving groups. The results also demonstrated that task-mastery goals were positively related to students' reported use of active learning strategies ( $r$ 's = .27 to .72) and negatively related to their reported use of superficial learning strategies ( $r$ 's = -.10 to -.45). Further, the change in task-mastery goals was able to explain the variance in active learning scores as well as in superficial learning scores controlling for achievement level.

Direct relationships between motivational orientations and emergent literacy skills have been found for emergent readers, even though the motivations studied were not reading specific and were not measured by children's self-reports. In 2000, Lepola and her colleagues conducted a longitudinal study to investigate the development of motivational orientations rated by trained experimenters as a function of divergent reading achievement patterns from pre-school to second grade. They employed the three-dimensional motivational orientation model (i.e., task orientation, ego-defensive orientation, social dependence) that was conceptualized by Salonen, Lehtinen, and Olkinuora (1998). The model emphasized adaptive goals with motivational orientations manifested in a stress situation and was linked to the "multiple achievement goals" (task goals, ability goals and social goals) proposed by Urdan and Maehr (1995). Task orientation indicates "concentration on task, verbal behavior indicating task-involvement, and willingness to think and experiment in play and problem-solving situations"; ego-defensive

orientation indicates “avoidance behavior, inhibition of action, and negative utterances referring to self or one’s performance”; social dependence indicates “verbal help-seeking, imitative behavior, and compliance-type task-approaching behavior”. Experimenters observed the children’s behaviors in various situations which might include competition and obstacles, and rated their motivational orientations on a five-point Likert type scale. The children were categorized into different reading achievement patterns and phonemic awareness groups based on their word reading skill and phonemic awareness scores respectively.

Results showed that motivational orientations differed with divergent reading achievement patterns and phonemic awareness levels. Specifically, children with a progressive reading achievement pattern reported higher task- and lower ego-defensive orientation at preschool stage than did children with a regressive reading career. No significant main effect of phonemic awareness on preschoolers’ motivational orientations was found though. After controlling for grade, the main effects of both reading achievement pattern and phonemic awareness were found to be significant. Children with low phonemic awareness showed lower task orientation over age than did children with high phonemic awareness. There was a similar effect of reading achievement patterns on task orientation. For ego-defensive orientation, children who had a regressive reading achievement pattern scored higher than did children who had a progressive reading achievement pattern over time. For social dependence goal, high phonemic awareness and progressive reading achievement children scored lower over time than low phonemic awareness and regressive reading achievement children respectively. Besides, the motivational orientation scales showed the lowest internal consistency with preschoolers ranging from .69 to .71 compared with first and second graders.



This study had several limitations, however. First, the motivational orientation scales were not reading specific. Preschool children were observed in a play-like situation in which they built a castle (“Build any kind of castle you like where anyone you like could live”) with LEGO bricks rather than in a literacy-related situation. A stronger direct relationship might be expected between reading-related goal orientations and emergent literacy skills. Second, even though preschool children were tested for knowledge of alphabet and phonemic awareness, the relationships between alphabet knowledge and motivational orientations were not examined. Last, only 48 children were recruited in the study and they were all Finnish speakers. Most Finnish children learn to read fairly quickly because of the transparency of the Finnish orthography, so that reading motivation might not be as much a driver of the development of reading skills as it is for children learning to read English (or Chinese, for that matter). Given this, emergent English readers might show more and stronger relationships between reading motivational orientations and emergent literacy skills or achievement.

Lepola and her colleagues (2005) continued to demonstrate the important role of task orientation in predicting emergent literacy skills through a two-year longitudinal study. One hundred Finnish-speaking nonreaders were tested for their task orientation, letter knowledge, phonological awareness, and rapid naming. Multiple relationships were found between these variables. For example, children with better letter knowledge in kindergarten showed faster naming and better phonological awareness and were more task-oriented in preschool and grade 1. Results also suggested that motivational tendencies start to contribute to individual reading trajectories relatively early prior to the beginning of formal reading instruction.

A reading-specific goal orientation measure for children in grades 2 to 5 was developed by Hamilton, Nolen and Abbott (2013) based on achievement goal theory framework. The measure

was made up of four motivation constructs: reading interest, reading mastery, reading ego orientation and reading avoidance. The authors further divided reading task orientation into interest (“read about something really interesting”) and mastery (“reading longer, harder books than before”). A 5-year longitudinal study (Hamilton, Nolen & Abbott, 2013) confirmed that this reading goal orientation measure has a four-factor structure and suggested that the structure tended to be stable over time. Internal consistency, however, was not reported. Unfortunately, other than reading avoidance, the other dimensions of the motivation measure did not show strong predictive power to students’ reading achievement as measured by the Wechsler Individual Achievement Test (WIAT II) - reading comprehension task. The WIAT II reading subscale includes three components, i.e., word reading (phonological awareness and decoding skills), pseudoword decoding and reading comprehension. It would be interesting for future research to examine the relationships between this reading goal orientation measure and multiple reading achievement variables.

Based on the above studies, multiple relationships between goal orientations and reading behavior, emergent literacy skills and reading achievement have been demonstrated which indicated the important role of goal orientations as motivation variables. However, so far, there is still limited research that studied goal orientations in reading motivation, let alone for emergent readers, and few, if any, reading goal orientation instruments used for preschoolers were consistent with Dweck’s motivation framework. Therefore, in this study, I have included reading goal orientations as an aspect of the motivational framework of the ERMS.

### **Self-Report Measures for Young Children**

In this section, a set of self-report instruments that measure preschool children’s self-concept are reviewed to determine the best means for obtaining this kind of report. The self-

concept measures examined here are global self-concept measures rather than children's ability or attitude toward academic subjects per se, and some of the measures have fairly limited validation evidence regarding their psychometric properties. However, the studies are useful for showing age-appropriate methodologies that can be adapted to obtain valid and reliable information on emergent reading motivation through pre-kindergarten children's self-reports.

Among all the early-developed self-concept scales for children from preschool to kindergarten, Brown IDS Self-Concept Referent Test (Brown, 1966) is one of the most widely used in psychological studies. It was designed to measure children's own feelings and attitudes toward their general ability, appearance, physical state, affective tone, and fears as well as how mothers, teachers and peers perceive them. In the administration of the test, prior to taking the test, each child has a Polaroid full-length picture taken. The child verifies the picture as him or her and then is asked a series of bipolar questions. Some questions use pairs of contrasting adjectives, such as "Is (child's name) happy or is he (she) sad". Others ask the child if he or she does or does not possess a given characteristic: for example, "Does (child's name) like to play with other kids or doesn't he (she) like to play with other kids". Since researchers found that children do not always provide a clearly positive or negative response, the adjusted scores are calculated based on the ratio of the number of positive responses to the total number of clear responses.

Several early studies helped to provide evidence for the validity and reliability of Brown IDS Self-Concept Referent Test. In a multi-year longitudinal study conducted by Shipman, Gilbert, and the Education Testing Service (1972) with young children, the coefficient alpha for the adjusted total score of the 15-item ETS version for years 1 and 2 ranged between .59 and .91 (Shipman, Gilbert, & Educational Testing Service, 1972). In another longitudinal study

conducted by Bridgeman and Shipman (1978), half of the correlations between the 14-item Brown adjusted scores of children ages 3.5 to 4.5 years and their cognitive performance in 3<sup>rd</sup> grade in math and reading were found to be significant, although there were more significant correlations between the Brown scores and third grade math scores than third grade reading scores. Further, Flynn (1993) found a strong relationship between preschool children's Brown score with both their mothers' and fathers' self-concept scores. Although further psychometric evaluation is still necessary, the measure showed promise for preschool children especially in terms of its validity around the topic of self-concept (Hughes, 1984).

Following Brown's measure, several other self-concept scales for young children also included pictures as one of the response stimuli, and were validated to some extent. For example, Maryland Preschool Self-Concept Scale (MPSS), created by Smith (1978), is another self-report measure used to evaluate 4-6-year-old children's feelings regarding his or her capabilities and qualities. It has 5 subscales including emotional, academic, peers, physical and adults. Compared with Brown's test, one of the modifications in the methodology used in MPSS is that respondents' Polaroid pictures are replaced with pairs of stick figures involved in different activities or showing different attitudes. In the MPSS, children are allowed to respond to each of the items either verbally or by pointing to one of the figures that most resemble themselves. Further, in the MPSS, 5 buffer items precede the test to help respondents fully understand the task, and ten pairs of parallel items are used to evaluate response consistency. Based on item analyses, Hughes and Leatherman (1982) revised the scale by eliminating subscales and repeated items and adding new items to MPSS. As reported by Hughes (1984), a moderate correlation of .67 was found between MPSS-Revised and Peabody Picture Vocabulary Test (Hughes, 1984). The Cronbach's alpha for MPSS-Revised was found to be .67 (Hughes & Leatherman, 1982).

However, as noted by Hughes, definite ceiling effects could be observed in the measure. The results indicated that improvement in MPSS-R's psychometric properties is still necessary. However, its age-appropriate format shows the potential for use in measuring young children's global self-concept and related constructs, such as emergent reading self-concept.

Different from Brown and MPSS, the Preschool and Primary Self-Concept Scale (PPSC) designed by Stager and Young (1982) for children ages 4-9 years employs an a semantic differential format (adjective bipolar scales designed to measure the connotative meaning of concepts) to measure the child's thoughts and feelings in reference to him- or herself or an object. In the PPSC, seven adjective bipolar scales were selected, and responses are scored on a 4-point scale, i.e., very good, a little bit good, a little bit bad, and very bad. Similar to MPSS, stick figures serve as one of the response stimuli and practice trials that precede the test are used to make the instrument age-appropriate. The questions were repeated with some respondents who stated merely "good" or "bad" without the qualifiers (i.e., "very", "a little bit"). During the repetition, the qualifiers were emphasized. The scale's internal consistency was acceptable with a coefficient omega of .72. Regarding validity, the PPSC significantly correlated with the Inferred Self-Concept Judgment scale completed by the teachers. The correlation coefficient was small but still higher than those between children's self-concept scores and the children's responses on several non-self-concept scales, (i.e., toy preference or play behavior assessments). Much the same as other self-concept instruments for young children, the PPSC scale has not been widely used in subsequent research, so this has provided limited opportunities for further validation of the scale. However, the findings showed the promise for using a four-point scale to evaluate young children's concepts of self somewhat validly and reliably.

Recent studies on self-concept measures have tended to move from pictorial stimuli (e.g., photos, stick figures) to the use of puppets in examining young children's self-concept given the idea that young children appear to favor life-like props for self-explanation (Measelle, Ablow, Cowan, P. & Cowan, C., 1998). Children's Self-View Questionnaire (CSVQ; Eder, 1990) based on the work by Tellegen (1985) on adult personality, is a self-report instrument that measures psychological self-concept of children as young as five on three dimensions, i.e., timidity, agreeableness, negative affect. In a videotaped version of CSVQ, each child participates in a game entitled "Who am I?" For each of the 62 CSVQ items, two puppets make contrasting statements about their behavior, feelings, or the way that other people behave toward them, for example, "I am usually happy" versus "I am not usually very happy". Children are asked to choose one of the two puppets that best represent what they think of themselves.

Validity evidence for the CSVQ was obtained from a series of studies conducted by Brown, Mangeldorf and their associates (Brown, Mangeldorf, Agathen & Ho, 2008; Brown, Mangeldorf, Neff, Schoppe-Sullivan, & Frosch, 2009). In a study of 114 five-year-old children (Brown et al., 2008), the Cronbach's alpha for each of the dimensions of CSVQ ranged from .68 to .72 based on an exploratory factor analysis. Item factor loadings were shown to range from .41 to .90. Further, CSVQ was found significantly correlated with the Child Personality Measure (Block & Bock, 1980), an assessment commonly completed by mothers to assess their children's personality. For example, children who scored high on agreeableness were also rated as more agreeable by their mothers ( $r = .38, p < .001$ ), and children who saw themselves as high on timidity were judged by their mothers as low on extraversion ( $r = -.33, p < .001$ ). Another study (Brown et al., 2009) also demonstrated that children's CSVQ scores at age 4 were related to their temperament, dyadic parenting, and triadic family interaction at age 3, which was in line

with prior findings on the association between children's self-concepts, their emotional characteristics and family dynamics (Thompson, 1998). Ceiling effects were not reported in either of the two studies, possibly because the puppets used in the scale were useful to induce young children to report valid responses.

Similar to CSVQ, Berkeley Puppet Interview (BPI; Measelle, Ablow, Cowan, P. & Cowan, C., 1998) is a more widely used semi-structured self-perception measure for children ages 3.5 to 8 years. It evaluates children's perceptions of six key aspects of their lives including academic competence, achievement motivation and peer acceptance. Each BPI item consists of a pair of contrasting statements that represent children's either positive or negative behaviors and attributes. In the original measure, 32 items describe positive attributes and behaviors (e.g., "I'm good at making friends"/ "I'm not good at making friends") and 28 items describe negative behaviors and attributes (e.g., "I tease other kids"/ "I don't tease other kids"). Further, the sequence of the contrasting statements is counterbalanced so that it is of equal possibility for children to first hear a positive and a negative statement. Moreover, neither puppet represents all negative or all positive attributes so that children would not identify either puppet by the valence of their attributes. In the BPI, the puppets used in the assessment are two identical tan-colored dog puppets with different names that are indicated on their name tags. The puppets encourage the child to give clear responses when his or her non-verbal responses are obscure. Unlike the CSVQ, BPI does not employ a forced-choice response format, which means that children are able to respond in whatever way they are comfortable with. The responses are then scored on a 7-point Likert-type scale by trained raters. For example, if a child responds negatively saying "I'm really dumb", the response is scored as 1, and when the child says, "I'm a dumb kid too",

the response is scored as 2. A response is scored as 4 if the child thinks both of the puppets are like him/herself or thinks him/herself “in the middle”.

Measelle and his colleagues (1998) conducted a three-year longitudinal study that followed 97 young children from pre-school to first grade to examine the psychometric properties of the BPI. Results showed that preschool children tended to perceive themselves positively since the distributions of the scores for each subscale were all skewed negatively. The distributions, however, also showed a fair degree of variability with the standard deviations ranging from .94 to 1.02 on a four-point scale. For the preschool period, the coefficient alphas for each subscale were in acceptable range from .68 (for peer acceptance scale) to .76 (for academic competence scale). Further, the internal consistencies of each subscale were similar across three years. In fact, the academic competence scale, achievement motivation scale and social competence scale during preschool period demonstrated the highest level of internal consistency across three years. Compared to the CSVQ, the correlation coefficients for the two administrations across prekindergarten and kindergarten were larger ranging from .29 to .49. As for BPI's validity, factor loadings of each item on their designated factor ranged from .51 to .78 with most values higher than .60. A general trend was that the factor loadings of each item got higher as the children progressed from pre-kindergarten and to first grade. For preschool children, all but the academic competence scale were significantly correlated with teachers' ratings on the children's achievement motivation, social competence and peer acceptance, with the correlation coefficients ranging from .29 to .32. However, none of the subscales were significantly correlated with either mother's or father's ratings. Not surprisingly, an increase in the magnitude of correlations between BPI and teachers' ratings as well as more significant correlations between BPI and mother's or father's ratings were found when the children were in kindergarten



and first grade compared with preschool. Unfortunately, the authors did not investigate the relations between preschool children's BPI score and their academic achievement scores. However, significant correlations were found between the achievement motivation scale and academic achievement tests (math and reading) for kindergarten and first-grade children and between academic competence scale and achievement tests (math and reading) for first-grade children only.

One of main differences in the methodologies used by the BPI and the CSVQ is that the BPI does not employ a forced-choice response format to obtain children's authentic responses. However, based on the prior results discussed above, the BPI did not show a significant improvement in internal consistency and in correlation magnitude with relevant constructs. Thus the methodology of allowing children to respond in their own words appears to be optional.

Thus assuming that emergent reading self-concept is a component of the global self-concept, it is concluded that developing a self-report measure that evaluates pre-kindergarten children's emergent reading motivation can be obtained validly and reliably as long as age-appropriate methodologies are used. First, young children seem to be willing to reveal genuine responses to puppets. Puppets might also help children keep their attention on the test. When designing these puppets, researchers should make sure that the puppets do not have a clear sex identity, which means that their clothes, their names and all other characteristics should be sex obscure. Second, a practice trial should precede the test to make sure that children fully understand the task. When a child responds with an unclear answer to a given item, the item should be repeated when the rest of the test is finished, a method used in the MPSS. Researchers might also use adjusted score, a proportion of the amount of positive responses over the amount of clear responses, to represent

the attribute being measured, which is what the researchers did with Brown IDS Self-Concept Referent Test where there was a large number of missing values.

### **Purpose of the Study**

Previous studies on children's reading motivation have several limitations. First, for preschooler, researchers have mainly focused on their early literacy experiences at home rather than in school, the main place where early formal literacy learning instructions occur. Second, most of the studies relied on informants' ratings to indirectly assess young children's reading motivation, instead of asking young children about their reading motivation directly. Third, prior studies on reading self-concept were limited to children at or beyond kindergarten level, and the existing reading self-concept instruments are not developmentally appropriate for preschool children in terms of content or methodologies. Last, there is a lack of research that employs a goal orientation framework to examining reading motivation, and a reliable and valid reading-specific goal orientation measure can hardly be found.

The current study aims to develop and provide a validation study for the ERMS for the purpose of helping researchers measure pre-kindergarten children's self-perceptions of emergent reading motivation in a pre-kindergarten class setting. Like the BPI, the ERMS uses a conversation format in which two puppets demonstrate contrasting behaviors or attitudes. In the ERMS, the puppeteer asks the child to choose the one that more resembles him or herself (e.g., "which of us is more like you?"). Unlike the BPI, the ERMS employs a forced-response format, which means that children have to clearly select one of the puppets.

ERMS is developed with a multidimensional structure, including reading self-concept, reading learning goal and reading performance goal subscales. First, based on Dweck's (1986) motivation framework, a *learning goal* is defined as the desire to increase level of competence

and to master something new. Accordingly, I wrote the items to reflect children's desire to learn new words, understand and talk about reading materials, improve reading ability and the tendency to persist in the face of obstacles. A *performance goal* is defined as the desire to demonstrate and to obtain favorable judgments from others regarding competence or to avoid negative judgments of competence (Dweck, 1986). Therefore, I wrote the items to reflect children's desire to demonstrate reading competence to their teachers, parents and peers and to outperform their peers in reading. The items also reflect children's tendency to evidence negative effects of relative reading failure to their peers. The goal orientations measured by the ERMS are all situational characteristics since they focus on reading behaviors that occur in the pre-kindergarten classroom. Finally, reading self-concept is measured from two aspects: (1) perceptions of competence in performing reading-related tasks, and (2) perceptions of reading-related task difficulty. This is adapted from the trichotomous structure of Reading Self-Concept Scale (Chapman and Turnner, 1995). All the items were generated so that their content corresponded to typical children's emergent reading activities in pre-kindergarten classrooms.

The psychometric properties of ERMS were examined from the following aspects.

1. Age-appropriateness. This was studied by determining the missing response rates (the percentage of missing responses) on both the test and item level.
2. Factor structure. Confirmatory factor analysis was conducted with Mplus 7.0 to determine whether the proposed three-factor structure (Reading self-concept, Reading performance goals, Reading learning goals) fits the data. Since the ERMS uses dichotomous items, the items were treated as categorical rather than continuous data. As recommended by the Mplus user's manual, I used the CATEGORICAL command, which allows for categorical data. Because the final sample size ended up being

relatively small (i.e., 56 children), three indices that are relatively insensitive for sample size were applied to assess the goodness of fit of the model: RMSEA, CFI and TLI.

3. Reliability. Internal consistency of each of the ERMS subscales was calculated with Cronbach's alpha. Corrected item-total correlation was reported. In addition, because a subset of participants was coded by two raters, inter-rater reliability was calculated to ensure that children's responses (i.e., pointing at particular puppets) could be reliably perceived by different raters.
4. Cross-scale correlation. Correlation between each of the ERMS subscale scores will be calculated.
5. Associations with emergent literacy skill. Based on prior research showing moderate correlations between reading motivation and literacy skills, the ERMS is expected to be moderately correlated with emergent literacy tasks, using Pearson correlation coefficients. However, given that there is limited information regarding the relationship between emergent literacy and emergent literacy motivation, this may or may not occur.

## **CHAPTER 2**

### **Method**

#### **Participants**

For the 60 children whose parental permissions forms were signed and returned, 57 completed the interview. For the children who did not participate in or complete the interview, reasons included limited English comprehension ( $n= 1$ ), reluctance to participate ( $n= 1$ ) or a cognitive problem ( $n= 1$ ). An additional child's responses were eliminated because the child selected the same puppet across the entire ERMS, suggesting that the child did not understand the task. Thus, the final sample size was 56.

The children were recruited through three private pre-kindergarten programs in urban Athens, Georgia area and all the schools are lottery funded. Although no information regarding family socioeconomic status was collected, the schools were located in neighborhoods representing a range of income levels. The children's ages ranged from 4.50 to 5.86 with an average of 5.03. Boys accounted for 58.9% and 41.1% were girls. Regarding ethnicity, 80.4% of the children were European-American. African-American and Asian-American children accounted for 8.9% respectively, and only 1.8% were Hispanic.

#### **Emergent Reading Motivation Scale**

*Item Generation.* The item generation for the scale proceeded in four phases. First, a list of items was generated with Reading Self-Concept scale (Chapman & Tunner, 1995) and the goal orientation measures used in Meece and Miller's study (2001) as references. I tried to make item wording diverse especially within each subscale so that children would not respond similarly to

the items based on wording. A researcher whose studies are focused on preschool children's literacy development helped me modify the wording of each item to be more understandable for young children. Second, an achievement motivation development expert examined the items I wrote to determine whether they reflected the constructs that the ERMS attempted to measure. This step was repeated whenever items changed to ensure content validity. Third, I interviewed four pre-kindergarten program coordinators individually to discuss the content of the scale. The feedback I obtained from them revealed a major concern that children might feel confused about the word "read" and some of the item statements appeared to be beyond the pre-kindergarten children's cognitive abilities. With such feedback, I randomly selected three states' (Georgia, Pennsylvania and Nevada) pre-kindergarten program content on reading issued by state department of education and extracted a list of activities that tended to be common across pre-kindergarten classrooms. For example, generally these standards reflected that pre-kindergartners should be able to listen to stories read aloud with understanding, understand illustrations in books, retell a story, recognize rhyming words in books, discuss and connect self to the events in books. These activities were then integrated into the items to take place of "read" as much as possible. In addition, several items were dropped due to poor reflection of the construct being measured or inappropriate difficulty level for pre-kindergarten children. After a set of revisions were completed, one of the four pre-k program coordinators having more than 10 years' working experience with pre-kindergartners provided positive feedback regarding the age-appropriateness of the piloted version. Fourth, based on pilot interviews with 11 pre-kindergartners, a total of eight items were dropped. Four of these items had no variability in responses (i.e., "I hope my teacher thinks I like books/ it's not important that my teacher thinks I like books", "I'm happy when my teacher reads to us/I'm not happy when my teachers reads to

us”, “if I cannot find words that sound alike, I keep trying/if I cannot find words that sound alike, I just give up”, “I’m happy when I learn new words/I’m not happy when I learn new words”). The children all selected the puppets with positive statements. Four items (i.e., “I cannot find words that sound alike in books/I can find words that sound alike in books”, “I like to go to.../I don’t like to go to ...”, “I want to stay there for the whole day/ I don’t want to stay there for the whole day”, “I get nervous if other kids know the words I don’t/ I don’t get nervous if other kids know the words I don’t”) had negative or zero correlations with subscale scores. Again, a few wording changes were made (e.g., “fun” is used instead of “interesting”). All of the pilot children enjoyed the experience and were able to complete the entire instrument. This fourth step resulted in the final version of the ERMS, with six items measuring reading self-concept, five items measuring reading learning goals and six items measuring reading performance goals.

Presentations of the statements across items were counterbalanced so that the number of times for children to hear the positive half of an item first was similar to that to hear the negative half first. Each puppet represented about half of the positive statements and half of the negative statements so that children would not identify a puppet with its statements.

*Administration and scoring.* The children were interviewed by two puppets given the name of “Dindin” and “Lanlan”. The protocol was modeled as a conversation with the puppets and it began with Dindin and Lanlan saying that they wanted to make friends with the child and get to know more about him or her (See Appendix A for the exact wording of the scale protocol.) The puppets were identical and gender-obscure, with a visible name tag on each of them. If the child asked whether the puppets were boys or girls, puppeteer said, “They are the same as you”. To help children better connect each puppet with its corresponding statement, the puppeteer gave the puppets distinct voices.

During the interview, puppeteer sat face-to-face with the child with a puppet in each hand. The two puppets represented contrasting behaviors or attitudes for each item. Children had to either point to or name the puppet that most resembled themselves. For example, one puppet might say “I want to learn new words,” the other puppet would say “I don’t want to learn new words,” and then the child would be asked by one of the puppets, “What about you? Which one of us is more like you?” It was also acceptable for the child to respond verbally (e.g., “The books there are hard.”) as long as the response was fully consistent with one of the puppets’ statements.

Four practice items (e.g., “I am good at counting/I am not good at counting”) preceded the content items to help children fully understand the task. When the child’s response was ambiguous, such as nodding or saying “yes”, puppeteers used explicit verbal instruction to help children understand how he or she is supposed to respond. For example, the puppeteer might say, “You think drawing is fun? Then you should point to or name Dindin since it’s like you.” Puppeteers repeated practice items whenever it was obvious the child did not understand the task.

Because the first content item was about where the books in the classroom were placed and the nomenclature for this differs from school to school (e.g., “book corner,” “library,” “book center,” etc.), one of the first questions the puppets asked was what this space was called before moving to the content items. For all items, if the child’s response was unclear or the child did not respond at all, puppeteer repeated the statements. If the repetition did not help him or her respond, either, puppeteers presented both of the puppets and asked, “Are they both like you?” A middle response was not encouraged but considered valid if the children respond explicitly with a reason (e.g., “Some of the books are hard, and some are easy.”). After each item, the puppeteer verified children’s response (e.g., “You don’t understand pictures in the book?”) in case they did not remember correctly which puppet represented which statement. To avoid missing data, items



with no or ambiguous responses were repeated once more at the end of the instrument. In addition, if a child appeared off-task, the puppeteers encouraged the child to remain focused on the task by saying, “(child’s name), can you look at the puppets? They are looking at you. They want to know more about you.”

Item responses were scored based on the instructions on scoring sheet described in Appendix A. A response was scored as 3 when it confirmed the construct and as 1 when it refuted. A middle response was scored as 2. Children’s responses for each subscale were summed with total scores ranging from 0 to 15 for reading learning goal, from 0-18 for reading performance goal and from 0 to 18 for reading self-concept.

### **Emergent Literacy Measures**

*Alphabet knowledge and beginning sound awareness* The Phonological Awareness Literacy Screening for Preschool (PALS-PreK; 2004 version) was used to measure preschoolers’ developing knowledge of important literacy fundamentals. PALS-PreK was designed for four-year-olds as a guide for teachers to adjust instruction based on children’s needs. It is also given in the spring to evaluate children’s resulting progress in emergent literacy. The entire assessment was designed to be completed in 20-25 minutes. It includes six sections, i.e., name writing, alphabet knowledge, beginning sound awareness, print and word awareness, rhyme awareness, and nursery rhyme awareness, although only the alphabet naming and beginning sound awareness subtests were given here. According to the PALS-PreK Teacher Manual, PALS-PreK was concurrently correlated with Test of Early Reading Ability-3 ( $r = .67, p < .01, n = 73$ ), another well-established direct assessment of three to six-year-old children’s mastery of early developing reading abilities. In addition, two longitudinal studies demonstrated that the spring PALS-PreK is

positively correlated with both the spring PALS-K given a year later ( $r = .53, p < .01$ ) and the PALS 1-3 administered in the fall of first grade ( $r = .56, p < .01$ ).

In the present study, only alphabet knowledge and beginning letter sound tasks would be administered given their potential relationships with emergent reading motivations and reading success. These sections of the PALS-PreK were chosen because prior findings suggested that alphabet knowledge and phonological awareness at the preschool stage were important predictors of later literacy achievement (Lonigan, Schatschneider, Westberg, 2008b). Since the manual of the PALS-PreK reported descriptive statistics and Cronbach's alphas for each of six tasks separately and each task can be administered on a different day, it is reasonable to selectively use the assessment. The alphabet knowledge test is divided into three parts, i.e., Upper-Case Alphabet Recognition, Lower-Case Alphabet Recognition and Letter Sounds. Once children can name 16 or more upper-case letters, he or she might be tested on knowledge of the lower-case alphabet. In the current study, I only administered the upper-case alphabet recognition task for the following reasons. First, as reported in the teacher manual, upper-case alphabet knowledge is predictive of emergent reading success given that children's performance on it in the fall is significantly correlated with their PALS-PreK total score ( $r = .69, p < .001$ ). Second, according to the manual, a more recent pilot study on 138 children attending Head Start and another publicly funded preschool, upper-case alphabet knowledge scores alone already show large variation, with a mean of 17.45 out of 26 and a standard deviation of 9.1. Since the current study also used a publically-funded preschool population, it seemed reasonable to assume that a similar degree of variation would apply.

The beginning sound awareness task included fourteen test items with four of them for practice use. For each item, testers are to present a picture, name it and ask the child to repeat the

word. Then the child is asked to produce the first sound of the word aloud. If the child gives the letter instead of the sound, administrators draw focus to the sound by saying something like, “That’s right, birds does begin with a ‘B’. It starts with a /b/ sound.” A study described in the PALS-preK manual showed good internal consistency for the beginning letter sound task with a Cronbach’s alpha of .93 and an inter-rater reliability of .99.

### **Procedure**

Children’s participation in the study was solicited by a consent form sent to children’s parents. The form was distributed by the pre-kindergarten programs. Only the children for whom parental permission was granted were tested. Most of the children were interviewed individually and only two children were interviewed with teachers and other children’s presence. No video or audio recordings were used. Children’s birth date and ethnicity were obtained from school files.

On the testing day, each child was retrieved from his or her classroom and brought to either a separate room or a quiet corner in a pre-kindergarten class at a time designated by the school personnel as convenient. After retrieving the child, the researcher asked if he/she would like to answer some questions asked to them by puppets. If the child agreed, the puppeteer administered the ERMS. Following the ERMS, the researchers administered the upper-case alphabet knowledge and beginning sound awareness from the PALS-PreK, in that order.

Children were allowed to decide to terminate the interview altogether at any time that they chose, although none chose to do so. At the end of the session, all children were asked, “Would you like to talk to the puppets next time?” When all the assessments were complete, I brought the child back to their classroom.

## **CHAPTER 3**

### **Results**

The ERMS was completed by most children in approximately seven minutes, but took longer for children who were very shy or for children who had difficulty focusing on the interview. Most of the children responded by pointing and some responded verbally. Fortunately, pointing worked very well in helping shy children to respond. When children's verbal responses were unclear, responding by pointing to a puppet was encouraged. Even though some of the children were unwilling to point at first, finally they were all willing to do so after the administrators' demonstration and encouragement. Only two out of 952 (0.2%) responses were middle values (e.g., "Some of the books are hard, and some are easy."). All the children indicated that they would like to talk with the puppets next time, suggesting that they did not find the task strange, intimidating, or difficult.

#### **Age-appropriateness**

The percentage of missing data for the first rater was 1.79% (1 out of 56) on item level and 0.11% (1 out of 952) on the instrument level. For the second rater who scored sixteen percent of children ( $n=9$ ), the missing data rate on the item level was 11% (1 out of 9) and .65% on instrument level. However, the missing data recorded by the second rater was not caused by children's failure to respond. Instead, the second rater found it difficult to determine which puppet the children pointed to from the angle where she sat. Given this, several improvements have to be made in the administration of ERMS. First, the interview might be videotaped from an appropriate angle to make sure that children's responses can be identified and can be double

checked after the interview. Second, puppeteers, who have the best angle on child responses, might manually indicate the puppet that the child selected to assist raters in recording child responses accurately.

To retain as many cases as possible, I imputed the single missing value on the ERMS with the item's median value and imputed a missing beginning letter sound test score with a linearly predicted score using alphabet knowledge as predictor.

Item three *I hope my parents think I like books/ I do not care if my parents think I like books* appeared to be somewhat difficult for several children to understand because it had to be repeated by the puppeteers. The difficulty in comprehension might be due to the complex structure of the statements. However, I retained this item in the ERMS since removing it would cause a slight decrease in Cronbach's alpha from .591 to .579.

### **Reliability**

Cronbach's alphas for each of the three subscales of the ERMS are presented in Table 1. These values ranged from .591 (reading performance goal) to .751 (reading self-concept). Only the reading self-concept subscale reached acceptable levels of internal consistency. For the reading performance goal subscale, item 17 *I'm sad when other kids know more words than I do/ I'm not sad when other kids more words than I do* was removed due to its negative item-total correlation ( $r = -.221$ ), and as a result the Cronbach's alpha increased from .390 to .591. This step of analysis resulted in sixteen items retained in the ERMS. Table 2 presents the corrected item-total correlations of the ERMS. Most of the items were moderately correlated with their corresponding scale score ranging from .313 to .538. Weak correlations  $< .30$  were found for three items: *I hope my parents think I like books/ I don't care if my parents think I like books*, *I want to learn new words/ I don't want to learn new words* and *I really want to figure out the*

*stories my teacher reads/I don't want to figure out the stories my teacher reads.* I decided to keep these items in the current study since removing them would cause a decrease in Cronbach's alphas and would result in no significant change in the relationships between the ERMS and emergent literacy skills.

Inter-rater reliabilities, shown in Table 1, were computed by correlating the scores of the first rater to those of the second rater for each of the ERMS subscales. As can be seen, there was some inconsistency between raters, even though the inter-rater reliabilities were consistently high. One of major reasons for disagreements in scores, when they occurred, appeared to be that the second rater reported that she had a bad viewing angle where she could not observe the direction of the children's pointing very clearly.

Table 1

*Score Distribution and Reliability*

Scales	Items	Mean	Standard deviation	Range	<i>Z<sub>skewness</sub></i>	Cronbach's alpha	Inter-rater reliability
RSC	6	13.93	3.760	6-18	-1.81	.751	.953
RPG	5	12.82	2.538	5-15	-3.97	.591	.978
RLG	5	13.00	2.472	7-15	-3.19	.616	.832
AK	26	19.45	7.211	2-26	-3.04	—	—
BLSA	10	8.39	2.432	0-10	-5.64	—	—

*Note.* RSC= reading self-concept, RPG= reading performance goal, RLG= reading learning goal, AK= alphabet knowledge, BLSA= beginning letter sound awareness.

Table 2

*Corrected Item-Total Correlations for Each Scale of the ERMS*

Item (Item Number)	RSC	RPG	RLG
Books are hard(1)	.505		
Need help(2)	.538		
Understand pictures in the books(5)	.425		
Answer questions about the books(9)	.509		
Know more words than other kids(11)	.440		
Can repeat a story (13)	.522		
I hope my parents think I like books(3)		.269	
Want to know more words than the other kids(7)		.313	
Want kids to see me with books(8)		.398	
Holding a book makes me look smart(14)		.466	
Answering my teachers' questions about books makes me look smart(16)		.305	
Want to learn new words(4)			.297
Want to figure out the stories my teacher reads(6)			.241
Like to talk about the books we read(10)			.436
Want to read better(12)			.511
When books are hard, I give up(15)			.387

*Note.* RSC= reading self-concept, RPG= reading performance goal, RLG= reading learning goal.

## Factor Structure

I conducted a confirmatory factor analysis with Mplus to examine if the hypothesized three-dimensional structure fits the data. Mplus uses weighted least squares means and variance adjusted (WLSMV) estimation to handle categorical data. The model showed excellent fit, with Comparative fit index (CFI) = .982 (>.95), Tucker-Lewis Index (TLI) = .979 (> .95) and root mean square error of approximation (RMSEA) = .026 (<.05). Factor loadings in each factor are shown in Table 3. As can be seen, the highest factor loading was found in item 13 *I can repeat a story/I cannot repeat a story* and the lowest in item 2 *If I read the books there, I need other's help/I can read the books there by myself* for reading self-concept. For reading learning goal, the highest factor loading was found in item 7 *I don't want to know more words than the other kids/I want to know more words than the other kids* and the lowest was found in item 3 *I hope my parents think I like books/I don't care if my parents think I like books*. For reading performance goal, the highest factor loading was found in item 12 *I don't want to read better/I want to read better* and lowest in item 6 *I really want to figure out the stories my teacher reads/I don't want to figure out the stories my teacher reads*. No post-hoc modifications were indicated from the analysis.



Table 3

*Confirmatory Factor Analysis Loadings for the Three Factors of the ERMS*

	RSC	RPG	RLG
Books are hard(1)	.711		
Need help(2)	.623		
Understand pictures in the books(5)	.782		
Answer questions about the books(9)	.784		
Know more words than other kids(11)	.711		
Can repeat a story (13)	.808		
I hope my parents think I like books(3)		.293	
Want to know more words than the other kids(7)		.911	
Want kids to see me with books(8)		.657	
Holding a book makes me look smart(14)		.776	
Answering my teachers' questions about books makes me look smart(16)		.545	
Want to learn new words(4)			.730
Want to figure out the stories my teacher reads(6)			.361
Like to talk about the books we read(10)			.793
Want to read better(12)			.849
When books are hard, I give up(15)			.593

*Note.* RSC= reading self-concept, RPG= reading performance goal, RLG= reading learning goal.

## Score Distributions

The means and standard deviations of the three subscales of the ERMS and the two tests of PAL-PreK are presented in Table 1. The subscale scores were computed by summing the item scores up for each of the ERMS dimensions. The distributions of the three scale scores were all negatively skewed, reflecting prekindergarten children's tendency to perceive their early reading abilities positively and the tendency to approach reading due to either the desire to practice reading skills or the desire to obtain favorite judgments. However, the standard deviations suggested that there was a fair degree of variability in children's responses on the ERMS. Based on the results of the pilot study in 2003 as reported in the PALS-PreK teacher's manual, the average emergent literacy skill level of the current sample was slightly higher than that of the pilot study sample in terms of mean scores (The mean scores of the pilot study was 17.46 (8.8) for upper-case alphabet knowledge and 7.42 (2.8) for beginning sound awareness.)

## Cross-Scale Correlations

Kendall's tau correlations for the ERMS scale scores are shown in Table 4. I computed Kendall's tau correlations instead of Pearson correlations since most of the variables in the current study were considerably skewed as shown in Table 1. The strongest correlation existed between reading self-concept and reading learning goal ( $r = .396$ ) and this was the only one significant cross-scale correlation; that is, children with a high reading self-concept tended to also have strong reading learning goals. Previous studies (Button, Mathieu, & Zajac, 1996; Hannula, 2002) indicated that it is possible for a child to have both reading performance goals and reading learning goals. The correlation in this study was positive but not significant,  $r = .206$ .

Table 4

*Cross-Scale Correlations of the ERMS and Correlations between the ERMS and Emergent Literacy Skills*

	RSC	RPG	RLG	AK	BLSA	Literacy
AK	.009	.083	.028	—		
BLSA	-.257*	-.083	-.184	.244*	—	
Literacy	-.107	.061	-.051	.729**	.578**	—

*Note.* RSC= reading self-concept, RPG= reading performance goal, RLG= reading learning goal, AK= alphabet knowledge, BLSA= beginning letter sound awareness. \* $p < .05$ ; \*\* $p < .01$ ; two-tailed.

### **Associations with Emergent Literacy Skills**

Kendall's tau correlations between the ERMS and the PALS-PreK tests can also be found in Table 4. Beginning letter sound awareness scores were negatively correlated with each of the three ERMS subscale scores, and the coefficients ranged from  $r = -.257$  to  $r = -.083$ . Even though the correlations between the ERMS and alphabet knowledge scores were all positive, they were very weak ranging from  $r = .009$  to  $r = .083$  and were not significant. I computed a general literacy score by first standardizing the children's scores on each of the two PALS-PreK tests and then totaling these Z-scores. These Z-scores were then correlated with the ERMS. A positive but not significant correlation was found between performance goal and literacy score ( $r = .061$ ). Both reading self-concept and reading learning goal were negatively correlated with literacy score. The only one significant correlation was found between reading self-concept and beginning sound awareness ( $r = -.257$ ).

## **CHAPTER 4**

### **Discussion**

The goal of this study was to construct and validate a self-report instrument, the ERMS, which is used to measure pre-kindergarten children's emergent reading. During the instrument construction, attention was paid to make sure that the instrument reflected motivation theories. That is, the scale was designed to reflect the literature on reading self-concept, social goals and learning goals for reading. I also paid close attention to the appropriateness of the methodology and item wording to be appropriate for collecting self-report information from young children. Finally, the scale was designed to reflect good psychometric properties. Reliabilities were examined in terms of internal consistency and inter-rater agreement. The scale also had to fit motivational theory. To determine this, confirmatory factor analysis was conducted to determine whether the three-factor structure fits the data. Given the absence of research on the relationships between emergent reading motivations and early literacy skills, concurrent validity was determined by correlating alphabet knowledge and beginning letter sound awareness scores with each of the ERMS scales.

The results from the current study suggested that children as young as prekindergarten have begun to differentiate their reading motivations to some extent, and their reading self-concept is better developed than their reading goal orientations. Although only one of the ERMS scales reached acceptable level of internal consistency measured by Cronbach's alpha, the magnitude of internal consistency for existing reading motivation measures for young children have not typically been found to be strong and they have usually fallen in the .60 to .75 range (Valeski &

Stipek, 2001; Mata, 2011). In the ERMS, reading self-concept showed the highest internal consistency compared with reading performance goal and reading learning goal. However, this internal consistency was still lower than the .84 alpha displayed for the RSCS designed for children ages 5 to 10. This is perhaps not surprising because the RSCS has a relatively large number of items (50 items) and the sample the authors used for validation was also larger ( $n=190$ ) than we had here ( $n= 56$ ). Further, the psychometric properties of the RSCS were examined with children a year older than those in the current sample. As noted by Chapman and Tunmer (1995), children's self-perceptions about reading tend to become more consistent with age. All these factors might work to elevate an instrument's internal consistency. Importantly, a confirmatory factor analysis that showed an excellent model-data fit, providing further evidence that children's responses on the ERMS were multidimensional. Among the three ERMS scales, items of the reading self-concept showed the largest factor loadings ranging from .623 to .808. Although cross-scale correlations were all positive, the magnitude of these correlations was weak. In sum, these findings showed that considering emergent reading motivation as consisting of multiple factors is more appropriate than considering it consisting of a single, undifferentiated factor.

The results also provided evidence for the age-appropriateness of the data collection method used in the ERMS with pre-kindergarteners. Using puppets to present the items was very effective in helping young children respond, particularly when the children being interviewed were too shy to talk or when their verbal responses were unclear. Switching the valence of statements from puppet to puppet also played an important role in keeping the children's attention on the statements throughout the interview. Moreover, the missing data rate was low and no child dropped out of the ERMS interview once they had begun the study. Finally, the ceiling effect that was found with several self-report self-concept measures for preschoolers

using pictures as response stimuli was not apparent in the current study. The grammar and wording of the ERMS, however, still needs improvement. For example, item three appeared to be difficult to understand and might be misinterpreted by the children due to the sentence structure. For item seven, *figure out* might not be age-appropriate for pre-kindergarten children, and it may be more reasonable to use *get* instead. And for item seventeen, the dependent clause *when other kids know more words than I do* appeared to be too long for the children to understand.

The biggest issue with the ERMS is that it showed limited power in predicting prekindergarten children's emergent literacy skill scores. However, the positive correlations found between alphabet knowledge and the ERMS scales are still encouraging. Probably, stronger and significant associations might have been found if the children were tested with both upper-case and lower-case alphabet knowledge since more accurate variation in alphabet knowledge can be revealed.

It was unexpected that the beginning sound awareness skill was negatively correlated with reading self-concept and reading learning goal. The problem, however, might be more with the way that the beginning sound awareness test was administered than with the ERMS. The guidance in the test manual allows the four practice items in the beginning letter sound awareness test to be repeated until the children got most of them right. This might have inflated children's performance on the content items. The manual also indicates that the PALS-PreK is not used to identify children but to help teacher adjust future literacy instruction plans. Thus it allows children to learn while they are tested. Indeed, our observations were that many of the children did not understand the phonemic awareness tasks initially. The possible inflation in scores from the learning during the testing then might have served to distort the relationship

between beginning letter sound awareness scores and the ERMS. Therefore, further studies might either test a broader range of emergent literacy skills using a different test or simply limit the chance for children to learn from practice items.

The lack of significant correlations between the children's reading self-concept and early literacy skills might also be an indicator of the instability of preschoolers' reading self-concept. During pre-kindergarten, the reading self-concept is still at its initial stage and is likely undergoing considerable developmental change. It might not become stable until the second year of schooling, as found by Chapman and Tunmer (1997). The correlations thus might become more significant and stable as children gain more experiences in reading. In addition, prior studies showed that achievement-related self-perceptions are formed as a result of the emerging patterns of accomplishment or difficulty with learning tasks (Helmke & van Aken, 1995; Skaalvik & Hagtvet, 1990). Therefore, further studies might also examine the correlations between pre-kindergarteners' emergent reading motivation and reading achievement in addition to emergent literacy skills.

The correlations between emergent literacy skills and reading goal orientations in this study appeared to support the position that learning goals and performance goals are not on a single continuum. Learning goals and performance goals should be associated differentially with literacy achievement, and the relationship for learning goals tends to be positive and negative for performance goal (Meece, Blumanfield & Hoyle, 1998; Meece & Miller, 2001). However, this is not the case in the current study. The lack of prior studies on the development of reading goal orientations among young children makes it difficult to interpret this inconsistency. Given the insufficient internal consistency of the goal orientation subscales in the ERMS, children's responses might not be well differentiated between reading learning goal and reading

performance goal, and the current correlation results between goals and emergent literacy skills may not be accurate. In addition, it remains to be explored that whether reading achievement score or reading-related skill score is a significant predictor of reading goal orientations for young children.

Several limitations exist in the current study. First, before it can be concluded that the ERMS is a developmentally appropriate reading motivation measure for pre-kindergarten children, its psychometric properties have to be investigated with a larger and more culturally and socioeconomically diverse sample. We were only able to obtain a limited number of permissions from the parents. The sample should be at least double that size. Remarkably, though, despite the relatively small sample size, the data fit the hypothesized structure of the instrument very well. In the current study, only 19.6% of the participants were members of racial minority groups, which is not fully representative of either the Georgia or national population. The latest census indicates that approximately 40% of the state population of Georgia are members of minority ethnic groups. Besides, the participants were all from lottery-funded private pre-kindergarten programs. Perhaps sampling children attending lottery-funded public school programs might have provided the greater diversity needed to be able to evaluate appropriateness for children of various backgrounds and income levels. Second, there were obstacles to fully examining pre-kindergarteners' reading goal orientations. Pre-kindergarteners have limited language skills as well as limited reading experiences, so the wording and content of the instrument have to be simple and easy to understand, which makes it difficult for the ERMS to thoroughly reflect goal orientation theories. For example, Dweck's work (Dweck, Hong & Chiu, 1993; Dweck & Leggett, 1988) defined learning goals as the desire to increase competency and to master something new. However, in the current study, the reading learning goal reflects



children's simple desire to learn to read, not necessarily to increase competency. In this way, it might be more reasonable to call it emergent reading learning goal. Further, Dweck's motivational framework is associated with competence beliefs. To fully validate a goal orientation measure developed based on Dweck's theory, examining relationships between goal orientations and competence beliefs appears to be necessary. However, this is also difficult to conduct with pre-kindergarteners.

In conclusion, the performance of children on the ERMS provides evidence that it is feasible to measure pre-kindergarten children's emergent reading motivation even though their reading-related experiences and skills are still very limited. It also helps to reveal that pre-kindergarteners' reading motivations are multidimensional, perhaps from the outset, and their reading self-concept tends to be better developed than their reading goal orientations. The ERMS scores did not show many meaningful correlations with children's emergent literacy skill scores. However, this might be improved by using PALS-PreK more appropriately, surveying a broader range of literacy skills, or by using other direct early reading achievement measures. Alternatively, it is possible that children's emergent literacy motivations are not yet connected to their actual emergent literacy skills. Future research needs to distinguish whether the failure of the ERMS to find a connection to emergent literacy is a function of the emergent literacy assessments used or a function of the lack of connection between children's reading-specific concepts of self and actual reading-related skills. The construction and validation of the ERMS is an ongoing process. Efforts are still needed to continue to look for ways to improve the performance of ERMS.

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## Appendix A

### Emergent Reading Motivation Scale

#### *Opening*

Lanlan: hi, nice to meet you! I am Lanlan.

Dindin: hi, nice to meet you! I am Dindin. Would you like to make friends with us? What is your name?

Lanlan: that's a good name! We want to know more about you. I have lots of friends.(a)

Dindin: I do not have lots of friends. What about you, ... (child's name)? Which one of us is more like you?

Lanlan: you can point to one of us or call the name.

Lanlan: spelling my name is hard. (b)

Dindin: spelling my name is easy. Which of us is more like you?

Lanlan: I am good at counting. (c)

Dindin: I am not good at counting. Which of us is more like you?

Lanlan: drawing is boring. (d)

Dindin: drawing is interesting. Which of us is more like you?

Lanlan: I read books sometimes, such as holding books, looking at pictures and reading words in books. Do you read, Dindin?

Dindin: yeah, sure! In my school, my teacher reads books to us.

Lanlan:right! And I also read books in the book center where there are many books!

Dindin: ...(the child's name), is there a place for books in your classroom? What is this place called?

#### *Content*

Lanlan: the books there are too hard. (1)

Dindin: the books there are very easy. Which of us is more like you?

Lanlan: if I read the books there, I need others' help. (2)

Dindin: I can read the books there by myself.

Lanlan: I hope my parents think I like books. (3)

Dindin: I do not care if my parents think I like books.

Lanlan: which of us is more like you?

Lanlan: I don't want to learn new words. (4)

Dindin: I want to learn new words. Which of us is more like you?

Lanlan: I don't understand pictures in the book. (5)

Dindin: I understand pictures in the book.

Lanlan: which of us is more like you?

Lanlan: I really want to figure out the stories my teacher reads. (6)

Dindin: I don't want to figure out the stories my teacher reads. Which of us is more like you?

Lanlan: I don't want to know more words than the other kids. (7)

Dindin: I want to know more words than the other kids.

Lanlan: which of us is more like you?

Lanlan: I don't care if kids see me with books. (8)

Dindin: I want kids to see me with books.

Lanlan: which of us is more like you?

Lanlan: I can answer most of the questions about the books my teacher reads. (9)

Dindin: I cannot answer most of the questions about the books my teacher reads. Which of us is more like you?

Lanlan: I like to talk about the books we read. (10)

Dindin: I don't like to talk about the books we read.

Lanlan: which of us is more like you?

Lanlan: I know more words than the other kids. (11)

Dindin: I don't know more words than the other kids. Which of us is more like you?

Lanlan: I don't want to read better. (12)

Dindin: I want to read better. Which of us is more like you?

Lanlan: I cannot repeat a story. (13)

Dindin: I can repeat a story. Which of us is more like you?

Lanlan: holding a book makes me look smart. (14)

Dindin: holding a book doesn't make me look smart.

Lanlan: which of us is more like you?

Lanlan: when books are hard, I give up. (15)

Dindin: when books are hard, I keep trying. Which of us is more like you?

Lanlan: answering my teacher's questions about books makes me look smart. (16)

Dindin: answering my teacher's questions about books doesn't make me look smart. Which of us is more like you?

Lanlan: I'm sad when other kids know more words than I do. (17)

Dindin: I'm not sad when other kids know more words than I do.

### *Ending*

Lanlan: I think we now have learned a lot about each other.

Dindin: we are very glad to make friends with you, ...(child's name).

Lanlan: definitely! Would you like to talk with us next time?

Dindin and Lanlan: See you, ...(child's name)!

## Emergent Reading Motivation Scale

ID number \_\_\_\_\_ Birth date \_\_\_\_\_  
 Gender \_\_\_\_\_ Ethnicity \_\_\_\_\_  
 School(name, city and state) \_\_\_\_\_  
 Alone/in face of other children and teachers \_\_\_\_\_

Item	response	score	response	score	Response	score
a	<b>Dindin</b> “I have lots of friends”		Both		<b>Lanlan</b> “I do not have lots of friends”	
b.	<b>Lanlan</b> “ Spelling my name is hard”		Both		<b>Dindin</b> “ Spelling my name is easy”	
c.	<b>Lanlan</b> “ I am good at counting”		Both		<b>Dindin</b> “ I am not good at counting”	
d.	<b>Lanlan</b> “Drawing is boring”		Both		<b>Dindin</b> “drawing is fun”	
(1)	<b>Lanlan</b> “The books there are too hard”	1	Both	2	<b>Dindin</b> “ The books there are very easy”	3
(2)	<b>Lanlan</b> “if I read the books there, I need others’ help”	1	Both	2	<b>Dindin</b> “I can read the books there by myself”	3
(3)	<b>Lanlan</b> “I hope my parents think I like books”	3	Both	2	<b>Dindin</b> “I do not care if my parents think I like books”	1
(4)	<b>Lanlan</b> “I don’t want to learn new words”	1	Both	2	<b>Dindin</b> “I want to learn new words”	3
(5)	<b>Lanlan</b> “I don’t understand pictures in the book”	1	Both	2	<b>Dindin</b> “I understand pictures in the book”	3
(6)	<b>Lanlan</b> “I really want to figure out the stories my teacher reads”	3	Both	2	<b>Dindin</b> “I don’t want to figure out the stories my teacher reads”	1
(7)	<b>Lanlan</b> “I don’t want to know more words than the other kids”	1	Both	2	<b>Dindin</b> “I want to know more words than the other kids”	3
(8)	<b>Lanlan</b> “I don’t care if kids see me with books”	1	Both	2	<b>Dindin</b> “I want kids to see me with books”	3

(9)	<b>Lanlan</b> “I can answer most of the questions about the books my teacher reads”	3	Both	2	<b>Dindin</b> “ I cannot answer most of the questions about the books my teacher reads”	1
(10)	<b>Lanlan</b> “I like to talk about the books we read”	3	Both	2	<b>Dindin</b> “I don’t like to talk about the books we read”	1
(11)	<b>Lanlan</b> “I know more words than the other kids”	3	Both	2	<b>Dindin</b> “I don’t know more words than the other kids”	1
(12)	<b>Lanlan</b> “ I don’t want to read better”	1	Both	2	<b>Dindin</b> “I want to read better”	3
(13)	<b>Lanlan</b> “I cannot repeat a story”	1	Both	2	<b>Dindin</b> “I can repeat a story”	3
(14)	<b>Lanlan</b> “holding a book makes me look smart”	3	Both	2	<b>Dindin</b> “holding a book doesn’t make me look smart”	1
(15)	<b>Lanlan</b> “when books are hard, I give up”	1	Both	2	<b>Dindin</b> “when books are hard, I keep trying”	3
(16)	<b>Lanlan</b> “answering my teacher’s questions about books makes me look smart”	3	Both	2	<b>Dindin</b> “ answering my teacher’s questions about books doesn’t make me look smart”	1
(17)	<b>Lanlan</b> “ I’m sad when other kids know more words than I do ”	3	Both	2	<b>Dindin</b> “ I’m not sad when other kids know more words than I do ”	1

Reading self-concept : 1, 2, 5, 9, 11, 13

total score: \_\_\_\_\_ (out of 18)

Reading learning goal: 4, 6, 7, 10, 12, 15

total score: \_\_\_\_\_ (out of 18)

Reading performance goal: 3, 7, 8, 14, 16, 17

total score: \_\_\_\_\_ (out of 21)