

Kindergarten Teachers'
Perceptions of Kindergarten Readiness

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Entering kindergarten ready to learn has become a growing concern in this country. The kindergarten year has important consequences for a child's acquisition of knowledge and skills that are powerful determinants for later school success. Kindergarten teachers report that more than half of children enter school with a number of problems and are not optimally ready to learn, posing them at-risk for school failure, retention, or in need of later intervention. Despite these concerns, research on kindergarten readiness and teachers' beliefs about readiness is sparse.

The purpose of this study was to examine kindergarten teachers' perceptions of readiness and the degree of importance they placed on 43 different characteristics, skills, and abilities demonstrating kindergarten readiness within seven theorized constructs of early learning and development, largely based on the National Educational Goals Panel's multidimensional framework. These constructs represented the seven scales in the researcher-designed and validated 5-point Likert-type response scale survey instrument. The survey was administered in early 2010 online and in paper format to a non-probability, convenience sample of 653 kindergarten teachers from the California Kindergarten Association and one Northern California public school district.

Descriptive statistics indicated that kindergarten teachers place greater importance on the social and emotional constructs of kindergarten readiness and on children's approaches towards learning than on academic skills. An exploratory, unconstrained factor analysis yielded six factors that statistically explained 61% of the variance of the six factors. The grouping of the items in the original seven constructs was conceptually reorganized. The findings reinforced kindergarten teachers' perceptions of the importance of developing a child's emotional maturity and self-regulation, sensitivity to and respect for others, and enthusiasm and eagerness to learn prior to entering kindergarten. The results of the study suggest that kindergarten teachers recognize important relationships and associations between the constructs, and they do not make the same kind of distinctions in constructs of readiness as has been previously theorized. The results of this study are also consistent with past studies that have indicated that kindergarten teachers place greater emphasis on social and emotional development and less emphasis on academic abilities as precursors for readiness.

These findings can assist in developing a common language among administrators, teachers, parents, policy makers, and legislators involved in early childhood education and can impact future steps taken by these stakeholders that determine curriculum development, instructional methodology, transitional practices, and school readiness policies.

Kindergarten Teachers' Perceptions of Kindergarten Readiness Statement of the Problem

Entering school ready to learn has become a growing concern in this country. Over two and one half million children enter the nation's public kindergartens each year (Snyder, Dillow, & Hoffman, 2008). Children begin school with considerable variation in their range of general knowledge, skills, and abilities. Entering kindergartners come from increasingly diverse ethnic, racial, cultural, social, economic, and language backgrounds, and they differ in the types of early care and educational experiences prior to kindergarten (West, Denton, & Germino-Hausken, 2000; West, Denton, & Reaney, 2001; Zill & West, 2001).

Many parents and educators are concerned whether children will have the knowledge and skills at age five to succeed in kindergarten. According to the most recent data from the

U.S. Department of Education, one of three children enters kindergarten without the skills needed to succeed in school (National Center for Educational Statistics, 2006; Zill & West, 2001). From the start of kindergarten, children from low-income families, English language learners, and children with multiple risk factors begin kindergarten lacking important readiness skills. Risk factors are not only associated with children's lower English literacy and math skills, but with problem behaviors that affect peer interactions, and a lack of task persistence, eagerness to learn, and attention (West et al., 2001). Test results from the Early Childhood Longitudinal Study of 1998-1999 (ECLS-K) found that nearly half of those children entering kindergarten with multiple risk factors scored in the bottom quartile in reading, math, and general knowledge skills. Similarly, risk factors are generally associated with lower parent ratings of the child's health, social development, and behavior, and teachers report that children with multiple risk factors display positive approaches to learning and positive social behaviors less frequently than those children without risk factors (West et al., 2000; Zill, 1999; Zill & West, 2001). More importantly, early school problems generally persist and intensify, as well as predict school adjustment and later academic problems, including retention, dropout, incidences of delinquency, and even aggression, crime, and violence (Boyd, Barnett, Bodrova, Leong, & Gomby, 2005; Fantuzzo, King, & Heller, 1992; Princiotta, Flanagan, & Germino-Hausken, 2006; Tremblay, Gervais, & Petitclerc, 2008). The kindergarten year has been shown to have important consequences for a child's acquisition of knowledge and skills that are powerful determinants for later school success (Pianta & Cox, 1999). Readiness skills at the start of kindergarten are associated with educational outcomes in later years (Denton & West, 2002; McClelland, Acock, & Morrison, 2006). The growing evidence that early childhood experiences are intricately linked to later school success has fueled recent interest in the importance of all children entering kindergarten ready to learn.

Studies have indicated that policy makers, legislators, administrators, parents, preschool teachers, and kindergarten teachers vary widely in their expectations regarding what children should know and be able to do before beginning kindergarten (Hains et al., 1989; O'Donnell, 2008; Piotrkowski et al., 2000; Wesley & Buysse, 2003). There is neither universal agreement nor a commonly held belief regarding kindergarten readiness. Furthermore, the complexity of kindergarten readiness becomes more apparent as one tries to establish operational definitions, guidelines, standards, articulations, and timelines. Many kindergarten teachers feel that a significant number of children enter kindergarten not optimally ready to learn (Hains et al., 1989; Piotrkowski et al., 2000; Smith & Shepard, 1988). Teachers report that more than half of children enter school with a number of problems (Rimm-Kaufman, Pianta, & Cox, 2000). Although prior studies have suggested that kindergarten teachers believe that social and emotional skills and abilities are important readiness attributes (Hains et al., 1989; Lin et al., 2003; Piotrkowski et al., 2000; Wesley & Buysse, 2003), prior research has also suggested that kindergarten teachers do not necessarily share a common set of beliefs about kindergarten readiness and how children learn (Logue, 2007).

There is consensus in the research literature that it is essential to understand kindergarten teachers' perceptions about what characteristics, behaviors, and skills are important for children's success when they begin school (Hair, Halle, Terry-Humen, Lavelle, & Calkins, 2006; Lin et al., 2003; Piotrkowski et al., 2000; Scott-Little, Kagan, & Frelow, 2006; Snider & Roehl, 2007). Research on teaching effectiveness suggests that the beliefs teachers hold about the curriculum, their students, and their roles and responsibilities directly influence their instructional practice and expectations in the classroom, which in turn affect their behavior in the classroom. Kindergarten teachers' readiness views and expectations have been shown to have a tremendous impact on the emphasis of their instructional strategies, their intervention and retention practices, and on their transitional practices for children entering kindergarten

(Bowman, Donovan, & Burns, 2001; Lin et al., 2003; Pajares, 1992; Rimm-Kaufman et al., 2000; Snider & Roehl, 2007).

There is strong evidence that kindergarten teachers play a pivotal role in the academic success of young children (Domitrovich et al., 2009; Neuman & Cunningham, 2009; Wigfield et al., 1998). Kindergarten teachers' views have been recognized as particularly important as critical stakeholders in the education of young children, and they should be solicited in the process of developing early learning standards (Scott-Little et al., 2006, 2007). Yet, kindergarten teachers claim that they do not have a voice in making decisions which determine curriculum, instructional methodology, and readiness policy and practice, and that their views are rarely solicited (Piotrkowski, et al., 2000; Wesley & Buysse, 2003). Research on kindergarten teachers' effect on the educational outcomes of young children in kindergarten is sparse (Guarino, Hamilton, Lockwood, & Rathbun, 2006), and little empirical research examines kindergarten teachers' beliefs about school readiness. Therefore, investigating teachers' perceptions of kindergarten readiness brings greater understanding to current and future practices regarding kindergarten readiness and is a necessary prerequisite to help ensure the success of young children in kindergarten and beyond.

Purpose of the Study

The purpose of this study was to examine kindergarten teachers' perceptions of kindergarten readiness and the degree of importance they placed on each of seven theorized constructs of early learning and development. Five dimensions of early development and learning identified by the National Education Goals Panel (NEGP) provided the foundation for the development of the seven constructs for this study. The five dimensions are as follows:

***Physical Well-Being and Motor Development,
Social and Emotional Development,
Approaches Toward Learning,
Language Development, and
Cognitive Development and General Knowledge***

The NEGP's Resource and Technical Planning Groups (Kagan et al., 1995) drew upon the research in early childhood education indicating that early learning and development is embedded within these five interrelated and interconnectedness of these dimensions, establishing a multi-dimensional framework in which to conceptualize readiness.

The NEGP suggested that a child's performance encompasses a wide range of abilities, skills, and individual characteristics. The NEGP multidimensional model of kindergarten readiness maintains that readiness is not comprised of a single set of skills or proficiencies, but is a multi-faceted construct that incorporates the individual characteristics of the child, the child's family, early childhood education programs, schools, and teachers to support children's early learning, development, and competencies. The NEGP model also recognizes individual, cultural, and contextual variability in each child's early learning and development (Kagan et al., 1995).

To achieve the purpose of this study, the researcher constructed a survey instrument. The NEGP's multidimensional framework provided the foundation for the survey. The researcher expanded upon the five dimensions to develop seven constructs. These seven constructs are as follows:

***Physical Well-Being and Motor Development,
Social Development,
Emotional Development,***

***Approaches Toward Learning,
Language Development and Communication,
Emerging Literacy Development, and
Cognitive Development and General Knowledge***

A brief description of the seven constructs are as follows:

Physical Well-Being and Motor Development: Characteristics and skills of a child's growth, physical health and fitness, gross motor, fine motor, sensory motor abilities, and functional performance.

Social Development: The characteristics and skills that enable the child to have positive, secure, and successful interactions and relationships with others, including peers, teachers, and other adults; cooperation, social skills, and conflict resolution.

Emotional Development: Characteristics and skills encompassing the child's feelings of self-concept, self-efficacy, self-control, and personal well-being.

Approaches Toward Learning: The inclinations, dispositions, and styles reflective of the ways a child becomes engaged in learning and approaches learning tasks.

Language Development and Communication: The characteristics and abilities measuring a child's receptive and expressive language abilities (listening and speaking), vocabulary, English language proficiency, communication, comprehension, questioning strategies, and language mechanics.

Emerging Literacy Development: The child's phonemic and phonological awareness, story sense and sequence, writing, concepts of print, alphabetic knowledge, and literature awareness.

Cognitive Development and General Knowledge: The knowledge base a child has and the ability to represent the world cognitively within three types of knowledge—physical, logico-mathematical, and social-conventional.

Each of these seven constructs were comprised of various characteristics, skills, and abilities representing kindergarten readiness, referred to as *indicators* within each construct. The study measured the degree of importance that kindergarten teachers placed on 43 specific indicators across the seven theorized constructs.

The study investigated the extent to which these seven theorized constructs were measured reliably, the extent to which they were statistically distinct from each other as determined by an exploratory unconstrained factor analysis, and the degree of emphasis that kindergarten teachers placed on each of the seven theorized constructs and the 43 specific indicators within the constructs.

The Research Questions

This study answered the following research questions regarding kindergarten teachers' perceptions of kindergarten readiness through quantitative data collection and analysis:

1. To what extent can the seven theorized constructs (Physical Well-Being and Motor Development, Social Development, Emotional Development, Approaches Toward Learning, Language and Communication, Emerging Literacy Development, and Cognitive Development and General Knowledge) be measured reliably?
2. To what extent are the seven theorized constructs statistically distinct from one another as determined by an exploratory factor analysis?
3. What degree of emphasis do kindergarten teachers place on each of the seven theorized constructs?

4. What degree of importance do kindergarten teachers place on the specific 43 indicators within each of the seven theorized constructs?

Research Design

This study used a descriptive research design. A survey in the form of a researcher-designed questionnaire, based on a five-point Likert scale, was employed to measure the degree of importance that kindergarten teachers placed on seven theorized constructs of kindergarten readiness. The survey contained 43 self-report items and 6 demographic questions. Survey methodology was chosen for this study in order to achieve a high response rate, in which the results could be generalized to the overall population of kindergarten teachers. Six questions investigating teachers' backgrounds were included in the initial survey. These background questions were chosen because of indications that teacher background variables impact their perceptions of kindergarten readiness beliefs (Lin et al., 2003; Smith & Shepard, 1988; Wesley & Buysse, 2003). The six teacher background variables were: (1) the number of years the teacher has taught kindergarten, (2) the number of years the teacher has taught in grades one or above, (3) the number of years the teacher has taught in a preschool or prekindergarten, (4) the type of school (public or private) the teacher currently teaches in, (5) the kind of school (urban, suburban, or rural) the teacher currently teaches in, and (6) the teacher's racial/ethnic background.

Sample

A non-probability, convenience sampling (a sample of subjects selected for a study because it is convenient to use them) was used to recruit a large group of kindergarten teachers. Initially, this group was comprised of kindergarten teachers registered and participating in the California Kindergarten Association (CKA) annual conference held in Santa Clara County on January 16-17, 2010. The study location was chosen because of: (1) the unique access to a large sample population representing the closest approximation to the general population of kindergarten teachers as possible, (2) the anticipated high interest conference participants would have in the survey, and (3) the researcher's geographic access to the conference site. In the past, over one thousand participants have attended this conference.

Approximately 550 participants attended the two-day CKA conference, of which approximately 475 were teachers currently teaching kindergarten. The other participants were comprised of preschool teachers, first grade teachers, and kindergarten teachers not currently teaching kindergarten. The majority of the participants at this conference were kindergarten teachers from both public and private schools in Northern California, although teachers from all parts of California, as well as from Nevada, Hawaii, Oregon, Arizona, and Washington attended. Of the 475 kindergarten teachers participating, 141 paper surveys were completed, resulting in a 30% return rate. No on-line surveys were completed during the conference.

Hoping to generate a higher survey completion rate to aide in the research study and recognizing the importance and relevance of the study, the CKA conference committee and CKA Board of Directors agreed to send the on-line survey link to the entire CKA membership (3,700 members) by email following the conference. The on-line survey was sent to the membership and was posted on *SurveyMonkey* for two weeks. CKA members were kindergarten teachers in the states listed above as well as from New Hampshire, Wisconsin, Montana, Texas, Alaska, and American Samoa. A total of 489 on-line surveys were completed by CKA members who had not participated in the conference or did not take the paper survey at the conference, resulting in a 13% return rate.

The final sample size was 664. It consisted of 141 paper surveys from the CKA conference, 489 on-line surveys from the CKA membership, and 34 on-line surveys completed during the second pilot test.

The demographic items on the survey provided general background information on the sample population. Descriptive statistics include frequencies and percentages and are shown in Table 1. The majority of respondents were experienced teachers of mostly White racial/ethnic background from a suburban/urban public school setting, having taught kindergarten for at least 7 years and with no or little preschool/prekindergarten teaching experience.

Instrumentation Development of the Survey Instrument

The survey instrument, named “Perceptions of Kindergarten Teachers Regarding Kindergarten Readiness,” was divided into two distinct sections: a questionnaire about kindergarten readiness with 43 closed-ended questions using a five-point Likert-type response scale and 6 demographic (background data) questions. The entire survey took between 5-10 minutes to complete. The researcher developed the instrument after reviewing the literature pertaining to kindergarten teachers’ perceptions of readiness and reviewing survey instruments used to collect data. Since the researcher was interested in examining kindergarten teachers’ beliefs of what characteristics they felt were important for an entering kindergartner to demonstrate, no existing instrument was appropriate for the purpose of the current study. Therefore, a new survey for the purpose of examining teachers’ perceptions towards readiness was constructed as needed. The survey was limited to collecting data regarding teachers’ beliefs about readiness characteristics, and the survey therefore did not address the ages of the entering kindergartners or whether or not they had prior preschool experience. The foundation for the survey instrument was Scott-Little, Kagan, and Frelow’s (2005) content analysis of states’ early learning standards. These researchers used the National Education Goals Panel (NEGP) framework (Kagan, Moore, & Bredekamp, 1995) as the foundation for their system of coding and analyzing the wide variety of the states’ 38 early learning standards documents in their study, which was used to organize the indicators within each construct.

Validity

Three strategies were applied to secure content-related evidence of validity for the survey instrument in order to ensure that the survey questions accurately reflected the constructs they represent. First, during test development, the researcher made every attempt to design appropriate indicators for each scale aligned with the framework used in the Scott-Little et al. study (2005). Second, a validity panel of six experts reviewed the instrument’s items and gave their appraisals of the extent to which the items accurately represented the constructs. The panel gave additional feedback on the wording of some of the survey items. Third, two pilot tests were administered. The purpose of the pilot tests was primarily to explore the practicality of the data collection and the amount of time necessary to complete the survey, to determine any ambiguities in the items, to identify items that could be eliminated, and to analyze internal consistency. The first pilot test was given to a group of eight kindergarten teachers in one Northern California public school. They were given the paper version of the survey after the expert panel group had revised it. The second pilot test was given to a group of 34 kindergarten teachers in one Northern California public school district. They were given the on-line version of the survey after it had been revised based on the revisions made after the first pilot test. To examine the construct validity of the instrument, a factor analysis was conducted after the

administration of the final survey. The factor analysis enabled the researcher to reduce the large number of items to a smaller number of factors that could be conceptually and statistically grouped together (Vogt, 2005).

Discussion of the Findings

Research Question 1: To what extent can the seven theorized constructs be measured reliably?

This study sought to assess the degree to which the researcher-developed survey instrument possessed internal consistency. Cronbach's coefficient alphas were calculated to measure the intercorrelation among the items, to measure the extent to which the items functioned homogeneously, and to determine if there was consistency in the scores among the individual items. The coefficient alphas, computed between .70 and .90, suggest good reliability of the survey instrument. The moderate to large positive correlations among these constructs (ranging from .41 to .87) suggests that although the scales can be measured reliably, they are not entirely distinct. They are strongly interrelated, suggesting that they may be measuring similar things. The existence of an overlap between constructs is consistent with the research literature and suggests that kindergarten readiness, as seen through these constructs, is comprised of highly interconnected and interrelated dimensions of early learning and development (Bowman, Donovan, & Burns, 2001; Kagan, Moore, & Bredekamp, 1995; Scott-Little, Kagan, & Frelow, 2003b, 2005; Shonkoff & Phillips, 2000). This is particularly important because this interconnectedness among the constructs is consistent with the multidimensional theoretical rationale for the current study, suggesting that there are multiple factors and interrelated constructs that contribute to a child's readiness.

Research Question 2: To what extent are the seven theorized constructs statistically distinct from one another?

The second research question addressed the way in which the seven theorized constructs were statistically distinct from one another and investigated the relationships among them. The main purpose of this factor analysis was to determine whether the factors that emerged through unforced statistical analysis matched the seven theorized constructs. An unconstrained exploratory factor analysis was conducted on the 43 survey items, which yielded six factors that statistically explained 61% of the variance explained by the total number of items. Upon close inspection of the specific items loaded into each factor, it was found that the six factors that emerged configured the teachers' responses to the survey items differently than in the seven theorized constructs as well as in any prior studies. Overall, the correlations among the six factors ($r = .07$ to $.63$) were lower than the correlations among the seven theorized constructs and therefore are presumably more distinct than the original constructs. Although there appears to be considerable overlap between the seven theorized constructs and the six resulting factors, there are also some noticeable differences.

This study's factor analysis unveiled a new conceptualization of readiness as configured by kindergarten teachers' perceptions. Most important, underlying this new conceptualization is the emergence of different kinds of relationships among previously theorized constructs of readiness. Items that had previously appeared conceptually different and unrelated are now shown to be associated with one another. As such, the kindergarten teachers grouped items together in a conceptually different way, suggesting new relationships among characteristics of readiness. This new conceptualization led the researcher of this study to seek a greater understanding of the way kindergarten teachers perceive readiness. Upon deeper consideration, these relationships have been interpreted as meaningful and important, and they

bring new meaning to the concept of kindergarten readiness. Following is a discussion and interpretation of these new relationships. The factors are discussed by the percentage of variance and means, rather than sequentially.

Factor 1, Emotional Maturity and Self-Regulation, the first of two primary factors, accounted for 40% of the total number of items indicated by teachers as important and accounted for the greatest percentage (38%) of the variance explained by the total number of items. Factor 1 had the highest averaged scale mean of all the factors ($M = 3.55$), indicating that the teachers rated this factor the most important. Many of the 17 items in Factor 1 had been identified as very important or essential by kindergarten teachers in prior studies, as well, such as a child's self-control, self-help skills, and the ability to communicate needs and wants (Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski, 2000).

The most illuminating finding in Factor 1 is that teachers perceived strong relationships among the 17 items in this factor. Teachers recognized that many of the skills represented in this factor operate collaboratively—a child's attentiveness, initiative, task persistence, and ease in making transitions are not only associated with, but are in part dependent upon the child's independence; the child's ability to communicate needs and use appropriate vocabulary are skills helpful in developing friendships, playing, and cooperating with other children; a child's self-control and independence are linked to the child's self-help skills; and positive classroom behavior is linked to compliance with authority and appropriate use of materials and language. These connections between items that have previously represented different constructs brings new meaning to the way the kindergarten teachers in this study conceptualized characteristics of readiness—mainly that these characteristics, abilities, and skills do not operate alone, but collectively.

Factor 3, Enthusiasm and Eagerness to Learn, was comprised of many items that had also been identified in prior studies as "very important" or "essential" by kindergarten teachers. These include items related to a child's enthusiasm and curiosity towards learning, interactions with adults, following directions, as well as overall good physical health (Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski, 2000). The teachers in the current study made some interesting connections between the five items in this factor. Upon initial examination, item (#2), "Child appears to be in overall good physical health," appears qualitatively different from the other items in this factor (items related to a child's enthusiasm and curiosity towards learning, interactions with adults, following directions, and observing and asking questions). However, overall physical health is arguably a pre-requisite and an underlying necessity for a child's positive approach to and engagement in learning. It may also impact a child's ability to effectively interact with adults and actively engage in strategies such as observation, questioning, and problem solving. In this factor, kindergarten teachers have conceptualized important interrelationships between these items that have been previously theorized as separate and distinct constructs.

Factor 4, Memory and Reasoning, was an association recognized by kindergarten teachers. The pairing of the two items in this factor, sequencing of events in a story and recognizing similarities and differences between objects, suggests that these two skills operate in tandem. This interesting connection between two seemingly different tasks from the constructs of emerging literacy and cognitive development suggest that a child's ability to conceptualize the sequencing of events in a story is related to the child's ability to recognize similarities and discriminate differences in physical objects, people, and events.

Factor 5, Sensitivity to and Respect for Others, was comprised of four items that kindergarten teachers perceived as related. These items all pertain to a child's social skills—sharing, taking turns, sensitivity to other's feelings, and resolving conflict. These social skills are clearly associated with one another in the way that a child interacts with peers. Prior studies have indicated that items very similar to these-- respecting other children, sharing and taking turns, and expressing feelings, and showing sensitivity to peers, were among social and emotional constructs also rated as "very important" or "essential"-- by over half the kindergarten teachers (56%) in the Heaviside and Farris (1993) study, by 76% of the kindergarten teachers in the Lin et al. (2003) study, by 68% of the kindergarten teachers in the Piotrkowski et al. (2000) study, and by the kindergarten teachers in the Wesley and Buysse (2003) focus groups.

Factor 6, Fine Motor, Shapes, and Colors, was comprised of only two items-- identification of colors and basic shapes and demonstrating proficient fine-motor skills. This finding indicates that teachers conceptually associated these two items with each other, suggesting that the ability to manipulate small objects, such as Legos, scissors, and paintbrushes, is related to a child's knowledge of colors and shapes, which may develop simultaneously through the process of exploration and learning.

Factor 2, Early Academic Abilities, the second primary factor, grouped together ten items from the original Emerging Literacy and Cognitive Development and General Knowledge constructs reflecting math and early literacy skills and abilities. The relationship of the items in Factor 2 is easily understood. These items all pertain to knowledge of phonemic awareness, print awareness, counting, writing numbers and letters, and story structure. In prior studies, items such as these have also been grouped together and referred to as "academic" skills (Hains, Fowler, Schwartz, Kottwitz, & Rosenkoetter, 1989; Heaviside & Farris, 1993; Lin et al., 2003; Rimm-Kaufman et al., 2000) or "basic" or "advanced knowledge" (Piotrkowski et al., 2000). It is interesting to note that despite the increased accountability and the "push down" of higher academic benchmarks and expectations in kindergarten, research findings over the past twenty years have indicated that kindergarten teachers' beliefs regarding these academic abilities have changed little over this time period.

In summary, the factor analysis found a better organization for the 43 items than the initial organization of the items in the seven original theorized constructs. The new grouping of the factors' six constructs that emerged from the factor analysis can be used as an alternative conceptualization of constructs of kindergarten readiness. These six new constructs have been shown not only to be generally more distinct from each other than the original seven theorized constructs, but they represent a new perspective in the way kindergarten teachers view readiness. New relationships between previously recognized important, yet distinctively different constructs emerged. The difference in the way kindergarten teachers conceptualized readiness in the current study is reflected in the way in which the factor analysis grouped items into six factors.

The results of the current study indicate that kindergarten teachers may have a different way of prioritizing and conceptually organizing readiness skills, abilities and characteristics. The grouping of items into these six factors suggests that kindergarten teachers recognize important relationships, associations, and distinctions among the items that impact the way they perceive readiness. One can conclude that the factors' new grouping of items and the relationships, interactions, and overlaps between the constructs are more important and representative of teachers' perceptions of importance than are the original seven theorized constructs. Additionally, the configuration of these six new factors is different than what has been found in prior research.

Research Question 3: What degree of emphasis do kindergarten teachers place on each of the seven theorized constructs?

A summary of the descriptive statistics obtained for each of the seven constructs is presented in Table 2. Kindergarten teachers placed the least degree of importance on the construct Emerging Literacy ($M = 2.12$, $SD = .79$) followed by Cognitive Development and General Knowledge ($M = 2.63$, $SD = .68$). They placed the greatest importance on Emotional Development ($M = 3.64$, $SD = .64$) and Social Development ($M = 3.55$, $SD = .66$). The relatively small standard deviations in the constructs of greatest importance indicated that teachers as a group agreed in their overall perception of the most important kindergarten readiness skills. On the other hand, the relatively high standard deviations for constructs of lower perceived importance indicated that teachers as a group were more divided in their opinion about the importance of these constructs, or, alternatively, these constructs elicited more varied responses. Upon examination of the means and standard deviations of both the seven original theorized constructs and the six new constructs that emerged from the unconstrained exploratory factor analysis, it can be concluded that kindergarten teachers in this study placed a strong emphasis on the social and emotional characteristics of readiness and perceived the non-academic abilities as having the least importance. This is consistent with findings in past studies (Hains et al., 1989; Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski et al., 2000; Wesley & Buysse, 2003) that indicated that kindergarten teachers held similar beliefs.

When interpreting the means of the seven original theorized construct's scales, it is also important to examine the items comprising each scale. Prior to the current study, specific indicators of readiness had not been agreed upon in the research literature. Items for the current study were adapted from prior studies (Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski et al., 2000), and from the Scott-Little et al. (2005) study examining state's indicators for early learning standards. Some of the constructs in prior studies were slightly ambiguous and not as clearly defined as others (Social, Emotional, and Approaches Towards Learning), and other constructs included sub-scales to differentiate what was being measured (Cognitive Development and General Knowledge, and Language Development and Communication) (Scott-Little et al., 2005). Therefore, there may have been some overlap in what the seven original theorized constructs in the current study specifically measured.

A comparison of the means and standard deviations for each of the six factors shows that kindergarten teachers placed the greatest and almost equal importance on Emotional Maturity and Self-Regulation ($M = 3.55$, $SD = .63$), Sensitivity To and Respect for Others ($M = 3.53$, $SD = .84$), as well as Enthusiasm and Eagerness to Learn ($M = 3.48$, $SD = .66$). The relatively small standard deviations in the factors, Emotional Maturity and Self-Regulation and Enthusiasm and Eagerness to Learn ($SD = .63$ and $.66$, respectively) indicated that teachers as a group agreed in their overall perception of the most important kindergarten readiness skills. Teachers placed the least degree of importance on the factor, Early Academic Abilities ($M = 2.06$, $SD = .79$), followed by Memory and Reasoning ($M = 2.50$, $SD = .86$). The relatively high standard deviations for these two factors of lower perceived importance indicated that the teachers as a whole were less homogeneous in their opinion about the importance of these factors.

The six new constructs that emerged from the factor analysis conceptually reorganized the grouping of the same items in the original seven constructs while still indicating teachers' perceptions of their importance. This may explain, therefore, the degree of emphasis the teachers placed on the factors. The lowest factor mean was that of Factor 2, Early Academic Abilities ($M = 2.06$, $SD = .79$), followed by Factor 4, Memory and Reasoning ($M = 2.50$, $SD =$

.86). The highest factor mean was that of Factor 1, Emotional Maturity and Self-Regulation ($M = 3.55$, $SD = .63$), followed closely by Factor 5, Sensitivity to and Respect For Others ($M = 3.53$, $SD = .84$), and Factor 3, Enthusiasm and Eagerness to Learn ($M = 3.48$, $SD = .66$).

Consistent with prior studies, kindergarten teachers in this study rated Factor 2, Early Academic Abilities ($M = 2.06$), the least important of all, indicating that they felt these readiness skills were only “Somewhat Important.” This finding is consistent with an emerging theme found in prior research, suggesting that kindergarten teachers believe social aspects of readiness are more important than academic ones (Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski et al., 2000; Rimm-Kaufman et al., 2000; Wesley & Buysse, 2003). However, an alternative interpretation should be considered. The relatively low mean for Early Academic Abilities does not necessarily imply that teachers do not consider academic readiness an important prerequisite for kindergarten readiness. An alternate interpretation is that kindergarten teachers might, instead, perceive academic skills to be more appropriately taught in kindergarten. Additionally, they might believe social and emotional development should be emphasized in preschool as important readiness skills for entering kindergarten.

In summary, the means of the original seven constructs inform us of the way in which kindergarten teachers in this study rated the importance of the constructs overall. A more accurate analysis of the importance the teachers placed on kindergarten readiness, however, is through examining the means of the six new factors. Overall, kindergarten teachers did not make the same kind of distinctions as has been shown in prior research and in early learning standards.

Research Question 4: What degree of importance do kindergarten teachers place on the specific indicators within each of the seven theorized constructs?

Kindergarten teachers ranked the degree of importance they placed on each of 43 different characteristics, skills, and abilities demonstrating kindergarten readiness (Table 3). Findings indicate that teachers were unanimous in their beliefs (92.5% of the teachers rated this as “Very Important” or “Essential”) that *self-help skills* was the most important of all the kindergarten readiness variables ($M = 4.65$, $SD = .63$). The relatively low standard deviation suggests that there was great homogeneity in the group’s responses to this item. Between 60 % and 74 % of the teachers also rated items regarding compliance with authority, ability to separate from parents, respecting others, cooperation, enthusiasm towards learning, self-control, sharing, and taking turns as “Very Important or “Essential.” Teachers ranked abilities and skills pertaining to academic areas as much less important. These included items relating to math concepts, early literacy, phonemic awareness, memory, and logic.

Results of this study indicate that the way in which teachers rated the importance of individual items is consistent with prior studies. Prior research has indicated that kindergarten teachers believe a child’s self-help skills, overall health, compliance with authority, interactions with others, enthusiasm and curiosity towards learning, self-control, and communication skills were far more important for readiness than academic skills and abilities (Heaviside & Farris, 1993; Hains et al., 1989; Lin et al., 2003; Piotrkowski et al., 2000; Wesley & Buysse, 2003).

In this study, the item with the greatest percentage (92.5%) of teachers choosing a rating of either “very important” or “essential” was (item #38), “Child demonstrates self-help skills: feeds self, takes care of bathroom needs, cleans up after self.” This finding is particularly interesting when considering the current educational climate of increased accountability, more rigorous K-12 state content standards, and more specifically, the demanding academic

expectations in kindergarten. The fact that there has been little change over time in what kindergarten teachers believe to be important, despite current pressures for students to perform to higher grade level standards, is impressive. This recognition of the importance of social and emotional development on early learning and later academic success confers with research findings in early childhood development.

Consistencies with prior research are also found in the items rated as having the least importance in the current study (Heaviside & Farris, 1993; Hains et al., 1989; Lin et al., 2003; Piotrkowski et al., 2000; Wesley & Buysse, 2003). Only 10% or less of all teachers (from 10.4% - 3.1%) rated items from both the constructs of Cognitive Development and Emerging Literacy, corresponding with items in Factor 2 (Early Academic Abilities) and Factor 4 (Memory and Reasoning) as “very important” or “essential.” These same items (items # 20, 7, 40, 29, 36, 37, 41, 11, and 32) were rated by kindergarten teachers as “not too important” or only “somewhat important” by 70.3% to 80.9% of the teachers. Even more impressive is the finding that the item (#11), “Child can read five or more sight words,” was rated by 88% of the teachers as “not too important” or “somewhat important,” suggesting that academic skills should be taught once children *enter* kindergarten rather than as preparation *for* kindergarten.

Upon close inspection of the teachers’ ratings of the 43 individual items in this study, it can be concluded that kindergarten teachers believe that characteristics from *all* the constructs are important to varying degrees. Over half the kindergarten teachers (from 59.3% - 92.5%) rated some items from all of the seven original constructs (except for Emerging Literacy) as “very important” or “essential.” This suggests that kindergarten teachers believe that a well-balanced developmental approach to learning and readiness for should strengthen a child’s skills in *all* constructs without focusing on narrowly defined skills. Additionally, this suggests that kindergarten teachers may believe, as has been found in prior studies (Heaviside & Farris, 1993; Wesley & Buysse, 2003) that teaching academic skills is part of kindergarten teachers’ jobs.

Summary of the Findings

Few studies have investigated kindergarten teachers’ perceptions of kindergarten readiness (Hains et al., 1989; Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski et al., 2000; Smith & Niemi, 2007; Smith & Shepard, 1988; Wesley & Buysse, 2003), and few studies have investigated kindergarten teachers’ perceptions of problems that kindergarten students experience during the transition to kindergarten (Early, Pianta, Taylor, & Cox, 2001; LoCasale-Crouch, Mashburn, Downer, & Pianta, 2008; Pianta, Cox, Taylor, & Early, 1999; Rimm-Kaufman et al., 2000). Of those studies investigating kindergarten teachers’ perceptions of readiness, only four have used surveys in their research designs (Hains et al., 1989; Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski, 2000), and of those four, two used a factor analysis as part of the analysis of the data (Lin et al., 2003; Piotrkowski, 2000).

There are a number of similarities and differences between the current study and the previous studies. Key consistencies between the current study and previous studies are the use of a survey design with Likert-type scale (Hains et al., 1989; Heaviside & Farris, 1993; Lin et al., 2003; Piotrkowski et al., 2000) and the use of a factor analysis in the analysis of the data (Lin et al., 2003; Piotrkowski et al., 2000). Yet, the current study was also different in the design of the survey items, drawing from the organization of indicators from states’ early learning standards (Scott-Little et al., 2005) besides drawing from prior studies. Further, the unconstrained exploratory factor analysis in the current study grouped items together in a different way than

has been done in the past, and therefore suggests an alternative conceptualization of the constructs of kindergarten readiness and the way kindergarten teachers view readiness.

One of the differences in the current study is the number of items used in the survey (43) which was similar to the number of items in the Piotrkowski et al. (2000) study (45 items), but much larger than the number of items in the Heaviside and Farris (1993) study (15 items) and the Lin et al. (2003) study (13 items), and much less than the number of items in the Hains et al. (1989) study (153 items). Another difference is that the sample population from the current study was much more diverse than in all the previous studies (with the exception of the 1993 and 1999 NCES studies which had access to nationally represented samples). Teachers in the current study were from both public and private schools from 11 states and 3 countries. Additionally, the current survey included some new items that had been added during the validity and pilot studies that added new data to examine. These included items about transitions between activities (#26), separation from parents (#43), task persistence (#17), conflict resolution (#18), and appropriate use of materials (#28).

One of the key differences in the current study, however, was the large sample size. The sample in the current study, consisting of 653 respondents, was a much larger sample relative to the previous studies attempting to investigate the same area (with the exception of the NCES studies of 1993 and 1999) using survey design. This large sample size helps support consistent findings in the Hains et al. (1989) and the Piotrkowski et al. (2003) studies with much smaller sample sizes of only 28 and 57 kindergarten teachers respectively. Additionally, the high response rate in this study suggests that kindergarten teachers were interested in the topic and seized the rare opportunity to share their views on readiness.

One of the most significant findings of the current study is the similar trend in what kindergarten teachers now report as being important for kindergarten readiness and in what they have reported in past studies--that the most important skills and abilities that prepare children for kindergarten encompass characteristics pertaining to their emotional maturity, self-regulation, eagerness to learn, compliance with authority, respect for others, communication and interactions with peers and adults, and overall good physical health. Teachers in the current study were consistent with teachers' views in prior studies indicating that academic abilities are not important readiness skills, suggesting instead that these skills are more appropriately taught during, not prior to, kindergarten. Children's effective functioning in the kindergarten classroom and early academic success is dependent upon strengths in all areas of learning and development prior to kindergarten.

Implications for Practice

By investigating and subsequently gaining a better understanding of kindergarten teachers' perceptions of kindergarten readiness, the results of this study support implications for practice in at least three main areas: (1) to further the research knowledge base regarding kindergarten readiness by focusing on the perceptions of kindergarten teachers, (2) to help inform policy decisions about developmentally appropriate and balanced early learning standards and to promote greater vertical alignment between preschool and kindergarten, and (3) to aid in the development of stronger transition practices aimed at preparing children for the adjustment to kindergarten through greater collaboration, communication, and consistency between preschools, families, and kindergarten.

First, focusing on the ways in which kindergarten teachers perceive readiness and giving greater merit to their views adds important perspective to the complexity of kindergarten

readiness. Kindergarten teachers' views have not been regularly solicited. The findings in the current study suggest that their perceptions can be of great value and provide needed credibility to kindergarten teachers' perspectives of readiness. The veracity of the current findings can give kindergarten teachers a stronger voice in playing a more pivotal role in determining how best to prepare children for early academic success. Their views can be instrumental in developing a common language among administrators, teachers, parents, policy makers, and legislators involved in early childhood education. The new conceptualization of readiness that emerged from this study can impact future steps taken that will determine curriculum, instructional methodology, and school readiness policies and practices. More specifically, greater attention can be placed on designing balanced and comprehensive early childhood educational curriculum and instruction that incorporate *all* constructs of early learning and development with a particular emphasis not only on social and emotional development but the interrelationship between social, emotional, language and literacy, communication, physical, and cognitive development. With effective vertical alignment between preschool and kindergarten, preschool's early learning standards and kindergarten's content standards will fit together and build upon one another. In this way, children will enter kindergarten ready to learn, and they will approach kindergarten academic standards well prepared.

Second, this study illuminates the large discrepancy between the degree of importance that kindergarten teachers place on the social, emotional, and behavioral components of readiness and the emphasis states place on the academic constructs of early learning standards. Therefore, the study's findings may aid in the development of a more balanced and comprehensive approach to early learning standards that reflects the importance of supporting proficiencies in *all* the constructs. Since almost all states in the United States have developed, or are in the process of developing early learning standards, greater attention should be paid to encompassing a broader, more balanced approach to these standards. Early learning standards should not simply be a "push down" of the K-12 state academic standards, but more effectively aligned to address the developmental needs of young children as supported by recent research in neuroscience and the views that kindergarten teachers hold toward readiness.

Finally, prior research has suggested that transition practices aimed at easing the child's adjustment to kindergarten are instrumental in preparing a child for school (Early et al., 2001; LoCasale-Crouch et al., 2008; Pianta & Cox, 1999; Pianta et al., 1999; Pianta, Cox, et al., 1999; Rimm-Kaufman et al., 1999; Rimm-Kaufman et al., 2000). The results of the study suggest that more of these transition practices will benefit not only the entering kindergarten child, but their families and teachers, as well. These practices include: (1) preschool teachers' visits to kindergarten classes, (2) kindergarten teachers' visits to preschool, (3) spring orientation meetings for preschool children and their families, (4) individual meetings between preschool teachers and preschool children's families about kindergarten, and (5) contact between preschool teachers and kindergarten teachers regarding curriculum, and specific children's preschool experiences (LoCasale-Crouch et al., 2008; Pianta et al., 1999). The results of the current study support the position that effective transition practices address the child's social and emotional needs during a challenging time of adjustment from preschool to kindergarten. These practices can help bridge the gap between preschool and kindergarten. They can help strengthen the communication and collaboration between instructional practices in preschools and kindergarten and provide consistency among the expectations that kindergarten teachers, preschool teachers, and families hold about readiness. Transition practices will help facilitate the move and adjustment to kindergarten so that children start school ready to learn.

Conclusion

This study sought to better understand kindergarten readiness from the unique and important perspective of kindergarten teachers. The theoretical framework of this study, grounded in the work of the NEGP (Kagan et al., 1995) and the ecological model on the transition to kindergarten (Pianta, Rimm-Kaufman, & Cox, 2000; Rimm-Kaufman & Pianta, 2000) supports the findings of the current study by conceptualizing readiness as a multidimensional model that incorporates the interrelatedness of families, early childhood education programs, schools, teachers, and the broader community to support children's early learning and development. The particular skills, abilities, characteristics, and knowledge that each individual child brings to school are a function of both the readiness of the child's environments before beginning kindergarten and the readiness of the schools in which they enroll (Copple, 1997; Kagan et al., 1995; NAEYC, 2004; NEGP, 1997; Shore, 1998). The views that kindergarten teachers hold as illuminated by the current study give further support to the originally designed theoretical framework of this study by recognizing the interconnectedness between and interrelationships among the items in these new constructs.

A new conceptualization of readiness emerged from this study, as well as a new knowledge base from which new policies and practices pertaining to kindergarten readiness can be implemented. This study suggests that greater attention should be paid to a broader, more integrated nurturing of children's development during the preschool years with exposure to learning experiences in *all* constructs. Kindergarten benchmarks should be established so that certain important academic abilities are recognized as *exit* skills, not *entry* skills. Kindergarten students should be given the opportunity to continue to grow in all areas of early learning and development during the kindergarten year without being expected to perform isolated tasks measuring their cognitive and literacy abilities to the exclusion of assessing growth in other areas. With the availability of early learning standards that reflect a more balanced approach with an emphasis on *all* constructs of early learning and development; effective transition practices and greater vertical alignment and collaboration between preschool, home, and kindergarten; and greater attention paid to the way in which kindergarten teachers perceive readiness, *all* children in this country will enter kindergarten more prepared for the rigorous curriculum and standards they face, and schools and teachers will show readiness for *all* entering kindergartners.

Author

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Table 1
Summary of Demographic Background Variables of the Kindergarten
Teachers in the Sample (N=653)

Variable	Frequency	Percent
Number of Years taught Kindergarten		
3 or less	94	14.4
4-6	108	16.5
7 or more	440	67.4
Missing Response	11	1.7
Total	653	100.0
Number of years taught in grades one or above		
0	149	22.8
1-3	214	32.8
4-7	116	17.8
8 or more	166	25.4
Missing Response	8	1.2
Total	653	100.0
Number of years taught in preschool/prekindergarten		
0	364	55.7
1-3	137	21.0
4-7	69	10.6
8 or more	76	11.6
Missing Response	7	1.1
Total	653	100.0
Type of School		
Public	564	86.4
Private	69	10.6
Missing	20	3.1
Total	653	100.0
Kind of School		
Rural	105	16.1
Suburban	389	59.6
Urban	145	22.2
Missing	14	2.1
Total	653	100.0
Racial/Ethnic background		
Multi-ethnic	63	9.6
Asian	38	5.8
Black or African American	9	1.4
American Indian or Alaskan Native	2	.3
White	472	72.3
Native Hawaiian or other Pacific Islander	6	.9
Missing	11	1.7
Total	653	100.0

Table 2
Means and Standard Deviations for the Seven Original Theorized Constructs (on a 5-Point Likert Scale)

Construct	# of Items	Mean	SD
Emotional Development	5	3.64	.64
Social Development	6	3.55	.66
Physical Well-Being and Motor Development	5	3.42	.61
Approaches Toward Learning	7	3.36	.67
Language Development and Communication	6	3.18	.69
Cognitive Development and General Knowledge	7	2.63	.68
Emerging Literacy Development	7	2.12	.79
Total Items in Seven Constructs	43		

Table 3
Ranked Order of Survey Items (1-43) Showing Means, Standard Deviations, and Percentages of Kindergarten Teachers Choosing "Very Important" or "Essential" (N=653)

Item	Variables	Percent of Teachers	Mean	SD
38	Demonstrates self-help skills	92.5	4.65	0.63
14	Compliance with teacher and authority figures	73.6	4.05	0.87
43	Separates from parent without anxiety	71.5	4.06	0.92
9	Respects rights of others by keeping hands to self/keeps to own "space"	67.9	3.88	0.92
24	Cooperates and plays with other children	66.5	3.85	0.82
1	Shows enthusiasm, eagerness, and curiosity	64.5	3.75	0.89
27	Self-control and positive classroom behavior	64.2	3.82	0.87
13	Shares and takes turns	61.9	3.76	0.91
2	Appears to be in overall good physical health	60.9	3.76	0.91
22	Communicates needs/wants/thoughts in primary language	59.3	3.78	0.91
16	Shows sensitivity to other children's' feelings	49.2	3.52	0.79
4	Follows 2-step directions	48.2	3.45	1.01
35	Listens attentively to story for 10 or more minutes	47.6	3.45	1.02
42	Self-confidence in abilities and pride in work	45.6	3.43	0.91
30	Attentiveness to activity/task for 10+ minutes	45.0	3.41	1.06
28	Uses classroom materials appropriately	44.6	3.42	0.89
10	Expresses emotions and feelings effectively	43.5	3.38	0.83
3	Communicates and interacts with adults effectively	43.5	3.42	0.87
34	Forms new friendships with peers	43.3	3.43	0.87
26	Transitions from one activity to another without problems	39.4	3.31	0.91
21	Demonstrates independence: completes activity/task on own	39.2	3.23	0.97

31	Understands word meaning/uses age-appropriate vocabulary	35.8	3.22	0.92
17	Task persistence: follows through on difficult tasks	34.2	3.18	0.89
39	Shows initiative: begins tasks on own	33.9	3.19	0.87
25	Can write own name	31.2	2.99	1.16
6	Observes, asks questions, solves problems	30.5	3.05	3.05
12	Identifies colors and basic geometric shapes	29.4	2.92	1.09
33	Communicates needs/wants/thoughts in English	28.5	2.86	1.14
23	Good fine motor skills: scissors, Legos, glue stick	28.3	3.00	0.94
18	Resolves conflict by using compromise strategies	27.6	2.98	0.88
15	Good graphomotor skills: correct pencil grip, traces	25.9	2.85	1.00
8	Good gross motor skills: jump, hop, skip, run	23.3	2.87	0.94
5	Recognizes and knows most letter names	21.6	2.59	1.10
19	Recognizes and states similarities and differences between two objects	16.5	2.65	0.94
20	Retells familiar story and sequences events	10.7	2.35	0.95
7	Can write most letters of the alphabet	10.4	2.07	1.03
40	Recognizes and writes numbers to 10 or above	10.1	2.05	1.07
29	Produces rhyming words	8.5	2.09	0.97
36	Counts to 20 or above	7.7	1.95	1.03
37	Identifies most letter sounds	6.7	1.84	1.01
41	Can state story structure after listening to a story	4.3	1.78	0.88
11	Can read five or more sight words	3.7	1.49	0.85
32	Understands concepts of time/associates activities with time of day	3.1	1.77	0.84

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