

# KINDERGARTEN TEACHERS' KNOWLEDGE AND PERCEPTIONS OF EARLY LEARNING-RELATED SKILLS AS PREDICTORS OF ACADEMIC ACHIEVEMENT

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## Abstract :

The kindergarten curriculum emphasized social-emotional development, including interpersonal and learning-related (L-R) skills. Since the implementation of more rigorous academic standards, kindergarten curricula have allocated less time for developing L-R skills. This study employed a triangulation mixed-methods design to examine pre- and post-policy kindergarten teachers' perceptions of the role of L-R skills in academic achievement. A total of 97 certified kindergarten teachers with at least one year of experience completed surveys, while 30 participants from this sample also participated in individual interviews. It was hypothesized that all teachers would rate L-R skills as important precursors to academic achievement, with pre-policy teachers rating them as more significant than post-policy teachers. Quantitative findings revealed no significant differences in teachers' perceptions of the importance of L-R skills or other school readiness skill constructs (L-R, interpersonal, academic). However, when asked to rank these skills, significant differences emerged: pre-policy teachers prioritized interpersonal skills, whereas post-policy teachers prioritized academic skills. No significant differences were found in teachers' beliefs about student achievement or teacher efficacy. Qualitative analysis identified specific L-R skills deemed important for school readiness, including following directions, listening, staying on task, working cooperatively, and expressing needs. Teachers' perceptions of the effects of L-R skills on academic achievement were categorized into nine themes, such as building confidence and motivation, supporting curriculum access, enhancing learning capacity, and aiding classroom management. The qualitative data also offered possible explanations for the lack of quantitative differences between pre- and post-policy teachers' perceptions.

**Keywords:** *Learning-related skills, Kindergarten teachers' perceptions, Academic achievement*

## INTRODUCTION

High-stakes testing is a growing phenomenon in today's public education system. Education policies (e.g., No Child Left Behind Act [NCLB], 2002) and programs (e.g., Head Start, Georgia Student Assessment Program) have emphasized the importance of standardized assessments and the consequences for all stakeholders (e.g., schools, administrators, teachers, students) based on student performance (Urrieta, 2004). This use of high-stakes testing has now been extended to the earlier grades. As a result, early childhood educators may feel pressure to focus more time and effort on academic instruction, leaving less time for other developmentally important areas such as socialemotional development. There is a wealth of literature indicating the importance of social-emotional development to early school adjustment and long-term success of young children; therefore, it is imperative that early childhood educators continue to enhance the growth of social-emotional as well as academic skills for children in their classrooms.

For the purpose of this article, high-stakes testing is defined as standardized assessments of student performance whose results may carry consequences (e.g., retention, school re-staffing) for students, teachers, administrators, and/or schools (Urrieta, 2004). First, an overview of high-stakes testing in public schools and its impact on early education with a focus on social-emotional learning is provided. Second, concerns from early childhood experts regarding the implementation of high-stakes testing with young children are presented. Next, the relationship of social-emotional development and academic achievement is highlighted. Finally, future directions and recommendations are presented on how early childhood educators can continue to address social-emotional instruction in the face of the high-stakes testing environment with support from mental health professionals (i.e., school psychologists, counselors, and social workers), administrators, and colleagues.

Social-emotional skills are an important part of school readiness. Many studies have found that educators reported that healthy social-emotional development is a critical aspect of school readiness. According to studies conducted across the country with kindergarten teachers, children need to be able to follow directions, not be disruptive, express their needs and ideas, and take turns and share in order to successfully navigate the kindergarten routine. Griffin (2007) examined the relationship between 267 kindergarten children's (46% girls; 62% White and 38% African American) work-related classroom behavior and their entry-level achievement. Students' workrelated skills were measured by teachers report on the Cooper-Farran Behavioral Rating Scale, administered in the fall of kindergarten. Students were administered a battery of achievement tests at the beginning of kindergarten, consisting of the Peabody Picture Vocabulary Test-Revised (PPVT-R) and the Peabody Individual Achievement Test-Revised (PIAT-R), as well as the StanfordBinet Intelligence Scale. The results revealed that work-related skills positively related to school readiness and students' ability to succeed in early academic subjects, when other demographics, such as cognitive ability and mother's education were controlled.

There is a wealth of research that points to the positive relationship of socioemotional skills to future school success (i.e., academic achievement). Two important studies investigating the relationship of early social-emotional skills as it relates to school readiness to future academic performance were conducted by tested 184 students at the end of kindergarten using the Early Prevention of School Failure screening package and the Social Skills Rating Scale (SSRS; Gresham & Elliott, 2010). The students were then administered the Stanford Achievement Test a year later. Information about promotion and retention were gathered at the end of each school year. Results of the study revealed that two social skill areas, cooperation and self-control, predicted first grade academic success as well as promotion and retention in kindergarten and first grade. McClelland, Acock, and Morrison (2006) found a positive relationship between kindergarten learning-related skills to reading and math trajectories in 538 children between kindergarten and sixth grade. Learning-related skills include self-regulation and social competence. Latent growth curves revealed that learning-related skills, measured by teacher ratings on the Cooper-Farran Behavioral Rating Scales, had a positive unique effect on children's reading and math scores between kindergarten and sixth grade and further predicted positive growth in reading and math between kindergarten and second grade. The study also found that students with poor learning-related skills performed lower than their higher-rated peers on reading and mathematics measures between kindergarten and sixth grade.

Social-emotional adjustment has been found to be a foundational competency linked to early school adjustment study of 1,764 urban Head Start students, age 44 to 81 months, investigated dimensions of social-emotional classroom behavior (e.g., approaches to learning, problem behavior) as it relates to early school adjustment. Fantuzzo and colleagues examined the unique contribution of approaches to learning and emotional and behavioral adjustment (i.e., social-emotional or early school adjustment) to student academic achievement. The Adjustment Scales for Preschool Intervention and the Preschool Learning Behavior Scale (PLBS; McDermott, Green, Francis, & Stott, 2000) were both administered in early fall. Results revealed two distinct and reliable higher order dimensions of classroom adjustment behavior: Regulated Behavior and Academically Disengaged Behavior. The Regulated Behavior factor consisted of high positive loadings for the Attention/Persistence and Attitude Toward Learning PLBS scales and negative loadings for Aggressive and Inattentive/Hyperactive ASPI scales. The Academically Disengaged Behavior factor consisted of positive loadings for Withdrawn/Low Energy and Socially Reticent ASPI scales and a negative loading for Competence/Motivation PLBS scale. Both dimensions contributed positive unique variance to the prediction of early mathematic ability and general classroom competencies before kindergarten entry, controlling for demographics of the child. In addition, the findings indicated that each dimension contributed independently to the prediction of academic risk, controlling for child demographics.

Similarly, Ladd, Birch, and Buhs (2009) conducted a study with 200 kindergarten students examining the relationship of social skills to early school adjustment. Researchers used a sociometric rating procedure to determine students' level of peer acceptance and number of mutual friendships. In addition, the researchers observed student social skills, including both prosocial and antisocial behaviors, during free-play. Six specific social skills were tracked, three prosocial behaviors (social conversation, cooperative play, and friendly touch) and three antisocial behaviors (aggression, object possessiveness, and arguing). Teachers were asked to complete the Teacher Rating Scale of School Adjustment approximately three to four months into the kindergarten school year. The study found that children who exhibited more prosocial behavior showed a more positive adjustment to school as measured by their number of mutual friendships, level of peer acceptance, and class participation. Students who displayed more antisocial behavior manifested lower levels of school adjustment as indicated by higher levels of peer rejection, conflictual teacher-child relationships, and low levels of class participation.

Rimm-Kaufman et al. (2000) conducted a survey of a nationally representative group of kindergarten teachers (N = 3595) who indicated that their number one concern for incoming students was a failure to follow directions followed by behavior concerns and finally academic difficulties. In addition, research highlights the need for early intervention with children who are exhibiting significant social-emotional difficulties. According to a survey conducted by the National Center for Early Development and Learning with kindergarten teachers, 46% of the teachers surveyed reported that more than half of their students enter school lacking self-regulatory skills and emotional and social competence to function successfully and learn in kindergarten. With the change in focus seen in many early childhood education programs, the concern is that the structure of these settings may not provide a sufficient foundation for young children's future academic growth. Further many research studies conducted over the last two decades indicated that the key attributes of social-emotional behavior in the classroom are malleable and easily influenced by intervention programs. These studies have found that social-emotional competencies such as prosocial behaviors, aggression control, emotional understanding, social-problem solving skills, and learning engagement can be developed through systematic instructional approaches in the classroom as is seen in many social and emotional learning (SEL) programs. For example, a study conducted with 67 kindergarten students examined the effects of the "Strong Start" curriculum on social and emotional competence using a time-series design (Kramer, Caldarella, Christensen, & Shatzer, 2010). Teachers and parents completed behavior rating scales for each student on four separate occasions, twice before the intervention (pre) with a 6-week interval between them, and twice following the intervention (post) also with a 6-week interval between them. The curriculum was made up of ten lessons covering topics such as recognizing one's own and others' feelings, handling anger and anxiety, being a friend, and solving problems. Topics were taught through direct instruction, example scenarios, and role-play activities. A stuffed animal was used as a mascot to enhance scenarios and role play. The program used popular children's literature to explore the topics and guide discussions. The findings revealed gains in students' prosocial behaviors and decreases in internalizing behaviors as rated by both teachers and parents (Kramer et al., 2010).

Academic competence and social-emotional competence are not mutually exclusive, but are developmentally linked and reciprocal in nature. Research has indicated that kindergarten students who enter school with limited social-emotional skills are at greater risk for low academic achievement while children with lower academic competence often have social-emotional difficulties (Raver & Knitzer, 2002). Given the nature of the relationship of these constructs, it is critical that an integrative, comprehensive approach to teaching that addresses both academic and social-emotional development simultaneously be taken when educating young children. For this integrative, comprehensive approach to occur, teachers need to be supported in delivering this kind of instruction through education and professional development.

## Statement of Problem

The study aimed to assess the Kindergarten Teachers' Knowledge and Perceptions of Early Learning-Related Skills as Predictors of Academic Achievement in Calasiao II District, Schools Division Office I Pangasinan during the school year 2025-2026.

Specifically, it sought answers to the following sub-problems:

1. What is the level of importance of Kindergarten teachers' knowledge and perceptions of early learning-related skills as predictors of academic achievement in terms of the following:
  - 1.1 learning-related skills to learners' school readiness;
  - 1.2 the relative importance of types of skills (i.e., learning related, academic, or interpersonal) that relate to a learner's school readiness;
  - 1.3 the relative importance of specific skills that relate to a learner's future academic success;
  - 1.4 school achievement; and
  - 1.5 efficacy in teaching learning-related skills.
2. Is there a significant difference between the groups?
3. What is the level of parents' perceptions regarding the importance of learning-related skills to learners' school readiness and academic achievement?
4. What is the level of parents' perceptions about the role of teachers in supporting the development of learning-related skill?
5. Based on the findings, what professional development program can be proposed to enhance the Kindergarten teachers' knowledge of early learning-related skills?

## METHODOLOGY

This chapter presents the methodology which includes the research design, the sources of data that involved the locale of the study, the research population, the instrumentation and the tools for data analysis.

### Research Design

Qualitative methodology was used to analyze the interviews. A multi-stage approach to qualitative data collection, analysis, and interpretation were used. The stages implemented were consistent with the deductive-inductive approach and the principles of grounded theory. Grounded theory is a simultaneous, recursive process of data collection, coding, conceptualizing, and theorizing based on constant comparison of the collected data. The grounded theory approach is structured in a manner that allows important constructs regarding kindergarten teachers' understanding of the importance learning-related skills to emerge from the perspectives of pre- and post- No Child Left Behind (NCLB) kindergarten teachers. The stages of the current study's qualitative analysis consisted of preparation, making decisions about the coding process, preparing coders, coding the data (deductive, inductive), and theme/pattern analysis. Further, inter-coder agreement methods, interpretation procedures, and processes to ensure trustworthiness were implemented.

### Source of Data

The research was conducted using the Kindergarten teachers from Calasiao II District, Schools Division Office I Pangasinan during the school year 2025-2026.

### Instrumentation and Data Collection

**Preparation.** In preparation for the study, the researcher immersed herself in the literature surrounding the topic of kindergarten parents' perceptions of learning-related skills and its relationship to academic achievement. Once the interviews were conducted they were transcribed and uploaded to the computer for coding. The researcher reviewed the interviews in detail and added reflections to the margins of the transcript to facilitate data analysis and development of codes.

**Deductive-Inductive Coding.** Deductive-Inductive coding was implemented. First, the data were reviewed and a deductive approach to coding was used. Deductive coding refers to the process through which codes are developed from preexisting theory and research. Then inductive coding was implemented to capture data that did not fit into the preexisting constructs found in the literature. During this process, the researcher conducted a line-by-line analysis of the transcribed interviews and developed codes of the participants' responses. The responses were entered into a qualitative software package and placed under appropriate codes and subcodes, describing its content and expressing their unique points. A research team committee member (school psychology doctoral student) and a PhD level school psychologist simultaneously use the developed code book to code an interview in an effort to build consensus. Coders met frequently to compare and analyze each other's breakdown of the data. During this consensus building process, definitions were developed, concepts and categories were discussed and codes were revised. This process continued until agreement was reached on the codes to be included. The coding of each interview was compared and the agreements and disagreements discussed. This process was used to refine the coding manual and clarify code definitions. As a result, the coding manual was revised numerous times as the coders worked to establish a consensus. Each set of revisions was documented in a coding manual, notes were added indicating the reasoning for the changes made providing an audit trail of the team's coding process.

**Inter-coder Agreement.** In coding the interviews, inter-coder agreement was sought. The initial nine interviews were coded by two individuals. The coding of the interviews was conducted separately by the researcher and a PhD level school psychologist. The coded interviews were then compared for inter-coder agreement and discrepancies were resolved. The two individuals reviewed the interview transcriptions together and agreed upon appropriate codes. This process allowed the coders to reach a shared understanding and identify the issues in the application of the codes. Through this method several codes were revised or eliminated. This practice was continued until a mean score of 85% or better agreement was reached. Agreement of 85% or above between coders was reached by the third interview and a mean score of at least 85% was reached by the 9th interview ( $M = 85.12\%$ ). The remaining interviews were coded by the researcher, while the second coder reviewed the codes for agreement to ensure consistent application of the codes and avoid coder drift. Inter-rater reliability for coder drift was maintained above 90%.

**Trustworthiness.** Several techniques were implemented to ensure trustworthiness. Trustworthiness indicates the extent to which one can have confidence in the study's findings. In this study, a combined use of deductive and inductive coding and inter-coder agreement was utilized to assist researchers in monitoring theoretical sensitivity (i.e., biases to meaning and data based on knowledge and experience). In addition, the researchers utilized an audit trail (i.e., a detailed recording of the coding and analysis procedures) to ensure dependability (reliability) and confirmability (objectivity) of findings. In addition, the researcher used triangulation in data interpretation to take full advantage of having multiple data sources. Using multiple data sources in interpretation ensures a richer, more robust account of the findings. Furthermore, examples and direct quotes from the interviews were reported to support key findings and to manage the threats to trustworthiness. These procedures utilized in qualitative research to establish rigor are an important way to increase our confidence that the voice of the participants is heard.

### Tools for Data Analysis

Participants for this study were recruited using criterion (i.e., selecting cases that meet a predetermined criterion) and chain sampling, which is a 30 recruitment method through which the researcher identifies initial participants and referrals are requested for additional participants that would meet the identified criteria for enrollment. The recruitment process consisted of the researcher making contact and asking for the support of the counselors and/or psychologists in schools in the metroAtlanta area in recruiting kindergarten teachers for participation in the study. An email containing the link and describing the study was sent to the counselors and/or psychologist and then forwarded to kindergarten teachers in the schools. This process continued until the desired sample size was met. During the first contact with each participant, the researcher provided a brief overview of the study and indicated criterion for participation (current, certified kindergarten teacher, year or more kindergarten teaching experience, working in a metroAtlanta school). If the teacher met this criterion, consent for participation was requested. All participants were administered a demographic form, the Learning-Related Skills (LRS) survey, the Learning-Related Skills Self-Efficacy Scale (LRSSES), and the Beliefs About School Achievement (BASA) scale online. A subset of the teachers was asked to participate in a semi-structured interview. Individuals for this qualitative phase were sought until thirty participants meeting the study criteria were secured. This study was designed within a constructivist framework, using the principles of grounded theory. Grounded theory emphasizes the development of knowledge based in context and the generation of theory by the researcher engaged in an ongoing interpretive interaction with data. Therefore the sample size for this portion of the study was selected based on Creswell's (2008) recommendation that grounded theory 64 studies include between twenty and thirty participants. Using the demographic information, a stratified sample (i.e., a sample of a population that is proportionally representative of pre- and post-NCLB teachers) was assembled considering the participants years of kindergarten teaching experience (less than 10 years or 10 or more years). Stratifying the sample in this manner allowed us to compare the perceptions of teachers with teaching experience both pre- and post-NCLB with those with only post NCLB teaching experience.

## RESULTS AND DISCUSSIONS

This chapter presents the data gathered, their analysis and interpretation in answer to the different sub raised in this study.

Data were analyzed based upon research questions. Descriptive and inferential statistics were employed to describe and examine pre- and post-NCLB teachers' perceptions regarding: a) the importance of learning-related skills to students' school readiness; b) the relative importance of types of skills (i.e., learning related, academic, or interpersonal) that relate to a student's school readiness; c) the relative importance of specific skills that relate to a student's future academic success; d) school achievement; and e) efficacy in teaching learning-related skills. Multivariate analysis of variance (MANOVA) was used to simultaneously test for differences between groups. If findings yielded significant results, univariate analyses of variance (ANOVA) were conducted to determine where differences existed. In addition, qualitative analysis was used to further analyze teachers' perceptions regarding the importance of learning-related skills to students' school readiness and academic achievement. Finally, teachers' perceptions about their role in supporting the development of learning-related skill were examined qualitatively.

A series of t-tests were generated to examine the comparability of the sample and sub-sample. These comparisons were made along demographic variables (i.e., Years of Teaching Experience & Age) as well as teachers' ratings of the importance of learning related skills, interpersonal skills, & academic skills. The t-tests revealed that the participants of each group were similar in age, years of kindergarten teaching experience and years of overall teaching experience. The t-tests also indicated that each set of participants responded similarly on items related to learning-related skills, interpersonal skills and academic skills.

### ***Research Question 1: How do pre-NCLB (No Child Left Behind) kindergarten teachers compare to post-NCLB kindergarten teachers with respect to their perceptions of the importance of learning-related skills to learners' school readiness?***

Table 1 presents the means and standard deviations for pre- (n=30) and postNCLB (n=30) kindergarten teacher perceptions of learning-related skills indicated on question 1of the Learning-Related Skills survey. The differences between these two group's perceptions of the importance of learning-related skills to students' school readiness were tested via multiple analysis of variance (MANOVA). The teachers' years of kindergarten experience (i.e., pre-NCLB or post-NCLB teacher) served as the independent variables while learning-related skills (i.e., seven learning-related items indicated on survey question one) served as the dependent variables. The results indicated no significant difference in pre- and post-NCLB teachers' perceptions of the importance of learning-related skills to students' school readiness, Wilk's  $\lambda = 0.962$ ,  $F(7, 89) = .504$ ,  $p > .05$ ; partial  $\eta^2 = .04$ . These findings contradict Hypothesis 1.

**Table 1**  
**Means and Standard Deviations of Pre- and Post-No Child Left Behind (NCLB) Kindergarten Teachers' Perceptions of the Importance of Learning-related Skills to School Readiness**

Item	pre-NCLB (n = 30) M/(SD)	post-NCLB (n = 30) M/(SD)	Total (N = 30) M/(SD)
Follows directions	4.50 (0.67)	4.34 (0.71)	4.41 (0.69)
Participates appropriately in groups	3.93 (0.87)	3.91 (0.77)	3.92 (0.81)
Sits still and alert	3.57 (1.04)	3.58 (0.93)	3.58 (0.98)
Finishes tasks	3.66 (1.06)	3.64 (0.86)	3.65 (0.95)
Staying on task	3.93 (0.79)	3.94 (0.89)	3.94 (0.84)
Tells needs/thoughts	4.16 (0.91)	4.04 (0.76)	4.09 (0.83)
Organizing work materials	2.89 (0.90)	3.00 (0.88)	2.95 (0.88)

Qualitative data analysis comparing pre-NCLB teachers' perceptions to postNCLB teachers' perceptions about the importance of learning-related skills to learners' school readiness revealed a coding hierarchy containing two primary (i.e., Level 1) codes: learning-related school readiness skills and effects on academic achievement. There were seven level-two codes that fell under the learning-related school readiness skills code and included: follows directions, listens, sits still, stays on task, works cooperatively in groups, tells needs and thoughts, and motivation. There were nine level-two codes which fell under the effects on academic achievement Level 1 code and included: builds confidence and motivation, foundation, helps access kindergarten curriculum, head start, increase learning capacity, not a determining factor, puts them behind, rate of learning, and supports classroom management. The codes were defined and quotations from the teacher interviews were used to further describe the codes and examine the results.

Learning-Related School Readiness Skills	Follows Directions pre=43% post=50%
	Listens pre=43% post=50%
	Sits Still pre=36% post=25%
	Stays on task pre=7% post=6%
	Works cooperatively in groups pre=14% post=13%
	Tells needs and thoughts pre=14% post=0%
	Motivation pre=7% post=6%

**Figure 1. Learning-related school readiness skills coding hierarchy**

**Stays on task.** A teacher who reported this Level 2 code as important to school readiness is expressing the need for learners to be able to work through a presented task from start to finish or as long as expected by the teacher. When asked to indicate what entry-level skills, behaviors, and/or attributes were important for kindergarten learners' academic success only one pre-NCLB (7%) and one post-NCLB (6%) teacher responded the ability to stay on task was important. .

**Works cooperatively in groups.** Works cooperatively in groups (Level 2) was coded when teachers indicated that it is important for learners entering school to be able to work along with their peers. This code was utilized when participants reported that such skills as turn-taking and participating in a group is important as an entry-level skill. One pre-NCLB teacher indicated that "...most importantly at the beginning of the year, they need to know...how to work cooperatively in groups." The one post-NCLB teacher that indicated this learning-related skill as important stated that "... as far as them being able to just achieve academically it is very important that they are able to work together." Indicating that "a lot of the things ... in the classroom now are center-based, so if there is an issue of being able to work with others ...then a lot of times its difficult for them to complete a lot of the assignments and tasks that are assigned ..."

**Tells needs and thoughts.** Tells needs and thoughts (Level 2) was coded when teachers indicated that children entering kindergarten need to be able to express their needs and thoughts. Only two teachers in this study indicated this learning-related skill as important to school readiness. Both of these teachers were pre-NCLB (14%) teachers.

**Motivation.** This level-two code was defined as a learner's tendency to show interest in school and learning. Learners show this skill by cooperating and participating in class activities. One pre-NCLB (7%) teacher and one post-NCLB (6%) teacher indicated this as an important school-readiness skill.

**Effects on Academic Achievement (Level 1).** The Level 1 code, effects on academic achievement, was defined as the resulting influences of early learning-related skills to learners' academic achievement. The following 10 Level 2 codes fell under

this Level 1 code: builds confidence and motivation, foundation, helps access kindergarten curriculum, head start, increase learning capacity, not a determining factor, puts them behind, rate of learning, and supports classroom management (see Figure 2).

**Builds Confidence and Motivation.** This Level 2 code indicated that possessing learning-related skills helps to build learner’s confidence and motivation to learn. This code was only expressed twice in this study by two post-NCLB teachers (2 out of 16 = 13%).

**Foundation.** Teachers referred to learners with learning-related skills as having a foundation or the prerequisites for school and lifelong learning. Results indicated that 9 out of 14 (64%) pre-NCLB teachers and 8 out of 16 (50%) post-NCLB teachers indicated that learning-related skills were a foundation to learners’ academic achievement.

Effects of Academic Achievement	Builds Confidence and Motivation Pre-0% Post-13%
	Foundation Pre-64% Post-50%
	Helps Access Kindergarten Curriculum Pre-79% Post-75%
	Head Start Pre-14% Post-0%
	Increase Learning Capacity Pre-35% Post-24%
	Not a Determining Factor Pre-7% Post-6%
	Puts them Behind Pre-43% Post-38%
	Rate of Learning Pre-43% Post-31%
	Supports Classroom Management Pre-21% Post-6%

*Figure 2. Effects on academic achievement coding hierarchy*

**Helps Access Kindergarten Curriculum.** This Level 2 code indicated that entering school with learning-related skills considered to be prerequisites to kindergarten keeps learners on track to accomplish expected academic goals. Further, teachers reported that these learning-related skills and behaviors supported and helped learners access the curriculum or presented material.

**Head Start.** This Level 2 code (head start) was discussed infrequently in this study being endorsed by only two pre-NCLB teachers out of 14 (14%) and none of the post-NCLB teachers. This code was defined as the indication that entering school with particular learning-related skills gives learners a head start.

**Increase Learning Capacity.** Increase Learning Capacity (Level 2) was coded when teachers indicated that a learning-related skill increased the learner’s ability to learn or how much they learn. Teachers who expressed that students were more successful and learned more if they have mastered certain learning-related skills were represented in this category. Thirty-six percent (5 out of 14) of the pre-NCLB teachers and 25% (4 out of 16) of the post-NCLB teachers in this study indicated that learningrelated skills increase learner’s learning capacity.

**Not a Determining Factor.** This Level 2 code was selected when teachers indicated that they did not perceive learning-related skills as a determining factor in learners’ achievement. Only one teacher in each teacher group, pre- (7%) and postNCLB (6%), expressed this viewpoint.

**Puts Them Behind.** This Level 2 code was selected when teachers indicated that learners entering school lacking in learning-related skills were starting off behind expectation and causing them to fall behind academically. Forty-three percent (6 out of 14) of pre-NCLB teachers and 38% (6 out of 16) of post-NCLB teachers in this study reported that learners who are still needing to develop appropriate learning-related skills tend to fall behind academically as a result.

**Rate of Learning.** This Level 2 code was selected when teachers indicated that learning-related skills affected learner’s ability to complete assigned work and/or the rate in which they were able to work through material. Forty-three percent (6 out of 14) of pre-NCLB teachers and 31% (5 out of 16) of post-NCLB teachers indicated that learningrelated skills affects learners’ rate of learning.

**Supports Classroom Management.** Under this Level 2 code teachers indicated that learning-related skills supported classroom management. This code was selected when teachers indicated that the development of learning-related skills helped their classroom structure to run more smoothly.

**Research Question 2: How do pre-NCLB (No Child Left Behind) kindergarten teachers compare to post-NCLB kindergarten teachers with respect to their rankings of the relative importance of specific skills that relate to a learner’s future academic success?**

A comparison of the pre- and post-NCLB teachers' rankings of the 17 specific school readiness skill items indicated on the survey including learning-related, academic, and interpersonal skills was conducted via a MANOVA. A Borda count was assigned to each item based on its ranking. Each item was assigned a certain amount of points corresponding to the position in which it was ranked by the participant (i.e., an item ranked most important received 5 points, items ranked 2nd most important received 4 points, etc.). All items that did not rank in the top 5 received 0 points. The results revealed a significant difference in the rankings of pre-NCLB and post-NCLB teachers on particular items (see Table 2), Wilks'  $\lambda = .650$ ,  $F(17, 79) = 2.504$ .

Due to the significance of the overall test and in the interest of item reduction, a comparison of the teachers' rankings is examined in three Borda count groups. Based on the previous study, the items were grouped in three groups, Learning-Related, Academic, and Interpersonal. The results indicated significant differences between group rankings, Wilks'  $\lambda = .842$ ,  $F(3, 93) = 5.795$ ,  $p < .05$ , partial  $\epsilon^2 = .158$ . Power to detect the effect was .944. Given the significance of the overall test, the univariate main effects were examined. Significant univariate main effects for pre- and post- kindergarten teachers were obtained for Interpersonal Borda count,  $F(1, 95) = 16.489$ ,  $p < .05$ , partial.

**Table 2**  
**Means and Standard Deviations of Pre- and Post-NCLB (No Child Left Behind) Kindergarten Teachers' Rankings of School Readiness Skills**

Item	pre-NCLB (n = 30) M/(SD)	post-NCLB (n = 30) M/(SD)	M/(SD)
Names colors & shapes (A)	0.43 (1.13)	0.25 (0.88)	0.33 (1.00)
Uses pencils & brushes (A)	0.20 (0.70)	0.34 (0.96)	0.28 (0.85)
Problem solving skills (A)	1.27 (1.74)	1.72 (2.10)	1.52 (1.95)
Knows most alphabet (A)	0.84 (1.40)	1.26 (1.95)	1.07 (1.73)
Counts to 20 or more	(A) 0.25 (0.82)	0.26 (0.79)	0.26 (0.83)
Read simple words (A)*	0.16 (0.57)	0.70 (1.55)	0.45 (1.23)
Is not disruptive (I)*	2.20 (2.00)	1.09 (1.66)	1.60 (1.89)
Shares appropriately (I)	0.09 (0.47)	0.13 (0.62)	0.11 (0.56)
Sensitive to others (I)	0.11 (0.39)	0.15 (0.69)	0.13 (0.57)
Interacting positively with peers (I)*	1.30 (1.58)	0.55 (1.05)	0.89 (1.36)
Follows directions (L)	3.93 (1.66)	3.38 (1.76)	3.63 (1.73)
Participates appropriately in groups(L)	1.20 (1.40)	1.08 (1.44)	1.13 (1.42)
Sits still and alert (L)	0.59 (1.30)	0.62 (1.39)	0.61 (1.34)
Finishes tasks (L)	0.36 (0.99)	0.36 (0.81)	0.36 (0.89)
Staying on task (L)*	0.82 (1.26)	1.62 (1.78)	1.26 (1.61)
Tells needs/thoughts (L)	1.20 (1.77)	0.98 (1.41)	1.08 (1.58)
Organizing work materials (L)*	0.02 (0.15)	0.26 (0.76)	0.15 (0.58)

**Note.** A = Academic skill; I = Interpersonal skill; L = Learning-related skill. Adapted from Lin, H.-L., Lawrence, F. R., Gorrell, J. (2003). Kindergarten teachers' views of children's readiness for school. *Early Childhood Research Quarterly*, 18, 225-237. \* $p < .05$ .  $\epsilon^2 = .148$ , power = .980; and Academic Borda count,  $F(1, 95) = 4.050$ ,  $p < .05$ , partial  $\epsilon^2 = .041$ , power = .513.

**Table 3**  
**Means and Standard Deviations of Pre- and Post-NCLB (No Child Left Behind) Kindergarten Teachers' Rankings of Certain Skill Constructs**

Item	pre-NCLB (n = 30) M/(SD)	post-NCLB (n = 30) M/(SD)	M/(SD)
Learning-Related Borda	1.16 (0.38)	1.19 (0.46)	1.18 (0.42)
Academic Borda	0.53 (0.50)	0.76 (0.60)	0.65 (0.57)
Interpersonal Borda	0.93 (0.59)	0.48 (0.49)	0.68 (0.58)

As seen in Table 3, the results revealed that pre-NCLB teachers ( $M = .93$ ) ranked interpersonal skills as more important to school readiness than did postNCLB teachers ( $M = .48$ ). In addition, post-NCLB teachers ( $M = .76$ ) ranked academic skills as more important to school readiness than did pre-NCLB teachers ( $M = .53$ ).

**Research Question 3: How do pre-NCLB kindergarten teachers compare to post-NCLB kindergarten teachers with respect to their perceptions of the relative importance of types of skills (i.e., learning-related, academic, or interpersonal) that relate to a learner's school readiness?**

To examine a comparison of pre-NCLB and post-NCLB kindergarten teachers' perceptions of the relative importance of certain skill constructs (i.e., learning-related, academic, or interpersonal) to learners' school readiness a MANOVA was conducted. The teachers' years of kindergarten experience (i.e., pre-NCLB or post-NCLB teacher) served as the independent variables and the skill constructs, learning-related, academic, and interpersonal skills, served as the dependent variables. The results of the MANOVA revealed that there was not a significant difference in how pre- and post-NCLB kindergarten teachers perceived the importance of school readiness skills, Wilk's  $\lambda = 0.984$ ,  $F(3, 93) = .491$ ,  $p > .05$ ; partial  $\epsilon^2 = .016$ .

**Research Question 4: How do pre-NCLB (No Child Left Behind) kindergarten teachers compare to post-NCLB kindergarten teachers with respect to their perceptions of their role in the development of learning-related skills?**

Qualitative data analysis comparing pre-NCLB teachers' perceptions to postNCLB teachers' perceptions about the role teachers' play in the development of learningrelated skills was examined. This Level 1 code encompasses teachers' views about their responsibility and approach to helping students develop and hone learning-related skills. Under this Level 1 code (Teachers'

role in the development of learning-related skills), six Level 2 codes emerged: setting expectations, teaching, modeling, providing guidance, preparing learners for future, and notifying parents.

**Table 4**

**Means and Standard Deviations of Pre- and Post-NCLB (No Child Left Behind) Kindergarten Teachers' Perceptions of the Importance of Certain Skill Constructs**

Item	pre-NCLB (n = 44) M/(SD)	post-NCLB (n = 53) M/(SD)	Total (N = 97) M/(SD)
Learning-related	3.81 (0.69)	3.78 (0.59)	3.79 (0.63)
Academic	3.58 (0.84)	3.59 (0.78)	3.59 (0.80)
Interpersonal	3.84 (0.70)	3.73 (0.61)	3.78 (0.65)
Teachers' Role in the Development of Learning-Related Skills	Setting Expectations pre=36% post=38%		
	Teaching pre=36% post=56%		
	Modeling pre=36% post=63%		
	Providing Guidance pre=36% post=25%		
	Preparing Students for Future pre=21% post=19%		
	Notifying Parents pre=0% post=19%		

*Figure 4. Teachers' role in the development of learning-related skills coding hierarchy*

**Setting Expectations.** In this Level 2 code teachers expressed the importance of setting the tone in their classroom and making learners aware of what was expected in terms of learning-related skills. In this study, 5 out of the 14 (36%) pre-NCLB teachers and 6 out of the 16 (38%) post-NCLB teachers indicated that it was their role to set expectations for their learners to help them develop learning-related skills.

**Teaching.** This Level 2 code was selected when teachers indicated that it was their role to teach learning-related skills directly, reporting that some learners come in “not having a clue about it [learning-related skills].” Only 5 out of 14 (36%) pre-NCLB teachers in this study indicated that direct instruction of learning-related skills was a part of their role as a teacher, while 9 out of 16 (56%) of post-NCLB teachers reported that directly teaching these skills was their obligation.

**Modeling.** This Level 2 code was selected when indicated that it was the teacher’s responsibility to go a step beyond giving learners expectations and demonstrate expectations by modeling the skills for them. Only 5 out of 14 (36%) pre-NCLB teachers indicated that modeling was their responsibility, while 10 out of 16 (63%) post-NCLB teachers reported it as part of their role as a teacher.

**Providing guidance.** The teachers that expressed this Level 2 code indicated that it was the teacher’s responsibility to take learners through the process step by step in learning these skills. In this study, 5 out of 14 (36%) pre-NCLB teachers and 4 out of 16 (25%) post-NCLB teachers in this study.

**Preparing Learners for Future.** This Level 2 code was selected when teachers indicated that the teacher’s role in developing learners’ learning-related skill was to prepare them for the future by building foundation. The data revealed 3 out of 14 (21%) pre-NCLB teachers and 3 out of 16 (19%) post-NCLB teachers reported that it was their role to prepare learners for future academic endeavors and experiences beyond school. Kindergarten teachers reported that learners will need these skills to be successful in later grades as well as in life.

**Notifying Parents.** This Level 2 code was selected when teachers indicated that it was the teacher’s responsibility to talk to parents about their expectations of learners in the area of learning-related skills and seek their assistance in the teaching and reinforcing of those skills at home.

**Research Question 5: How do pre-NCLB (No Child Left Behind) kindergarten teachers compare to post-NCLB kindergarten teachers with respect to their beliefs about school achievement?**

Teachers were administered the survey that examined their beliefs about factors that contribute to learner achievement. The differences between these two group’s beliefs about school achievement were tested via ANOVA. Teachers’ years of kindergarten experience (i.e., pre-NCLB or post-NCLB teacher) served as the independent variable while the mean scores of their responses to survey items in individual factor groups (i.e., Child Ability, Child Effort, Family, Teachers) served as the dependent variables.

**Research Question 6: How do pre-NCLB (No Child Left Behind) kindergarten teachers compare to post-NCLB kindergarten teachers with respect to their efficacy for teaching learning-related skills?**

The Efficacy scale was developed by members of the research team. In order to determine if this scale should be a part of the BASA family of factors, a correlation matrix was generated. It indicated that the Efficacy scale was related to the Child Ability ( $r = .34$ ) and Child Effort ( $r = .27$ ) scales. For this reason, the differences between these two group's perceptions of efficacy related to teaching learning-related skills were tested via MANOVA. The teachers' years of kindergarten experience (i.e., pre-NCLB or postNCLB teacher) served as the independent variable while the efficacy skills as indicated on LRSSSES served as the dependent variables. The quantitative results indicated no significant difference in pre- and post-NCLB teachers' perceptions of efficacy related to teaching learning-related skills, Wilk's  $\lambda = 0.929$ ,  $F(5, 90) = 1.382$ ,  $p > .05$ ; partial  $\epsilon^2 = .071$ .

**Table 5**  
**Beliefs About School Achievement (BASA) Scale**

Item	pre-NCLB (n = 30) M/(SD)	post-NCLB (n = 30) M/(SD)	M/(SD)
Child Ability	2.87 (0.69)	2.78 (0.77)	2.82 (0.73)
Child Effort	3.13 (0.60)	3.17 (0.57)	3.15 (0.59)
Family	3.18 (0.73)	2.97 (0.68)	3.07 (0.71)
Teachers	3.97 (0.60)	4.00 (0.52)	3.98 (0.55)
Efficacy	3.73 (0.40)	3.58 (0.38)	3.65 (0.39)

**The Relationship of Learning-Related Skills to Academic Achievement**

Learning-related skills play a significant role in the attainment of academic achievement. These skills have been found to affect both early school success (McClelland et al., 2006) and future academic outcomes. Learning-related skills are linked to a child's academic success by providing the foundation for positive classroom behavior and setting the stage for later social behavior and academic performance. Researchers reported that children who had difficulty regulating their attention, emotions, and/or behavior showed lower academic achievement than their more regulated peers longitudinal study of kindergarten revealed that negative emotionality and poor self-regulation early in the year affected the types (e.g., prosocial, antisocial) of interpersonal relationships they developed with their peers and teachers. Data were collected through observations and socio-metric rating procedures and classroom-based interpersonal relationships (e.g., teacher-child, mutual friendships, peer acceptance) were found to predict the learners' end-of-year achievement levels on standardized tests because of their relationship with learners' classroom participation.

Further, students who demonstrated a deficit in a learning-related skill such as interest and involvement in class activities were found to be more at risk for poor school performance (Alexander et al., 2013). A longitudinal study investigating the effects of 790 first grader's classroom behavior on school performance over a 4-year period was examined. Data collection occurred in three out of the four years. Homeroom teachers' ratings of classroom behavior on 14 behavior items, using an instrument adapted from Wave 1 of the National Survey of Children, in the spring of their first, second, and fourth years of school were used to predict spring grades in reading and math and spring scores on verbal and quantitative subtests from the California Achievement Test (CAT) battery.

Learner cooperation and self-control, components of learning-related skills, were found to significantly predict promotion and retention of kindergarten children. At the end of kindergarten, children were tested using the Early Prevention of School Failure screening package and the Social Skills Rating Scale (SSRS; Gresham & Elliot, 2010), and a year later using the Stanford Achievement Test. Information on promotion or retention was gathered in late spring for the two school years and four kindergarten screening areas were found to be predictive of first grade academic success: Receptive language, Visual Memory, Cooperation, and Self-Control, two of which are learning-related skills (i.e. Cooperation and Self-Control). The SSRS Social Skills subdomain consists of the following subscales: Cooperation, Self-Control, and Assertion. The Cooperation and Assertion subscales yielded a significant positive correlation at the .05 level with all four SAT subtests (i.e., Total Reading  $r = .29$ ,  $r = .14$ ; Total Math  $r = .28$ ,  $r = .15$ ; Language  $r = .29$ ,  $r = .14$ ; Listening  $r = .20$ ,  $r = .20$  respectively).

**Perceptions of Kindergarten Teachers about the Importance of Learning-Related Skills**

Over the last several decades, studies investigating kindergarten teachers' perceptions revealed that teachers find learning-related skills important to learner success in kindergarten. Through the use of large-scale surveys, studies found that kindergarten teachers reported learning-related skills as critical to school readiness and early school success. According to researchers, learning-related skills were perceived by teachers to set the stage for learners to be able to engage in academic activities and as prerequisites to sustained academic performance (Dockett & Perry, 2002).

Similar teacher perceptions about the importance of learning-related skills were found in two longitudinal studies of nationally representative group of kindergarten teachers (Rimm-Kaufman, Pianta, & Cox, 2000; Lin et al. 2003). The first study consisted of 3,595 kindergarten teachers who indicated that their number one concern for incoming students was the ability to follow directions, followed by behavior concerns, and finally, academic difficulties. The participants of the next study (Lin et al., 2003) included 3305 kindergarten teachers from the Early Childhood Longitudinal Study- Kindergarten cohort. The findings revealed that kindergarten teachers viewed the social aspects of learning (e.g., tells wants and thoughts, 83.9%; not disruptive of the class, 78.6%; follows directions, 77.5%; and takes turns and shares, 73.6%) as a higher priority than academic skill development (e.g., counts to 20 or more, 14.6%; knows most of the alphabet, 21.4%; names colors and shapes, 32.3%; and uses pencils, brushes, 36.0%).

**Teachers' Perceptions of Efficacy in Learning-Related Skills Instruction**

It is important to consider teachers' level of efficacy in particular areas of instruction as it has been found to contribute to school-based curriculum implementation (Ransford et al., 2009). Teacher efficacy is defined as an individual's belief that he or she has the teaching skills needed to influence a particular outcome (Heller et al., 2011) and is one of the few teacher characteristics

consistently related to teacher behavior and student achievement. Teachers' perception of their level of efficacy in teaching certain skills has an effect on their willingness to accept responsibility for the development of those skills. Therefore, gathering information about how confident teachers feel in their ability to provide good instruction in areas of importance, such as learning-related social skills is imperative to curriculum supporting the development of learning-related social skills being implemented with fidelity. Given the documented positive relationship of learning-related skills to learner achievement it is important to explore how teachers perceive their level of competence in this particular instructional area.

Studies investigating the relationship of teacher experience to teacher efficacy have generally found that teacher efficacy is more likely to increase during the period of pre-service training, stabilize after the teacher begins teaching full time, and then show a general decline as the teacher becomes more experienced (Klassen & Chiu, 2010). Klassen and Chiu (2010) found a nonlinear relationship in their study examining the relationship of teachers' (N=1430) years of experience to three domains of self-efficacy (instructional strategies, classroom management, and student engagement). Teachers' years of experience showed a nonlinear relationship with all three domains of self-efficacy, increasing from early career to mid-career and then falling afterwards.

Georgiou (2008) found that experienced teachers (N = 154) tended to contribute student achievement to biologically determined factors, factors uncontrollable to the child, and factors stable over time (e.g., intelligence), while pre-service or student teachers (N = 159) believed more in the role that teachers play (i.e., teachers' instruction) in student learning. These beliefs about what contributes to a student's achievement play a role in teachers' willingness to persist in the delivery of instructional strategies and intervention. Teachers' preconceived notions about what students can accomplish affect the level of challenge they present to particular students (Georgiou, 2008).

Given the findings surrounding the relationship of teacher experience and teacher self-efficacy, it is important to investigate this relationship as it relates to efficacy in teaching learning-related skills. This study will specifically compare the perceptions of kindergarten teachers with less than 10 years of experience to those with 10 or more years of experience. This should give some insight to the relationship of years of experience to efficacy in this area, as well as explore how teaching both pre- and postNCLB and teaching only post-NCLB effects teacher self-efficacy in the area of learning-related skills.

### **Learning-Related Skills Survey**

Learning-Related Skills survey was used to assess teachers' perceptions of the importance of learning-related skills to school readiness in comparison to interpersonal and early academic skills. This survey consists of 17 items reflecting early academic (e.g., "Knows most alphabet"), interpersonal (e.g., "Shares appropriately") and learning-related skills (e.g., "Follows directions"). Teachers were asked to rate the importance of the items to school readiness on a five point Likert scale ranging from "essential" to "of little or no importance." These items were administered in a survey used in a longitudinal study of a nationally representative group of kindergarten teachers with a reported internal consistency (Cronbach's alpha) coefficient of .88 (Lin et al., 2003). For this study, Cronbach's coefficient alphas were calculated for each construct. The coefficient alphas for the learning-related skill ( $\alpha = .86$ ), academic skill ( $\alpha = .85$ ), and interpersonal skill ( $\alpha = .78$ ) constructs were computed between .70 and .90, suggesting good reliability of the constructs. Teachers also were asked to rank the top 5 out of the 17 items presented, in terms of their importance to future academic success.

### **Learning-Related Skills Self-Efficacy Scale (LRSSSES)**

The LRSSSES was administered to the participants and included four questions related to teacher efficacy to influence learning-related skills. This scale was developed specifically for this study by two faculty members at the designated university. The questions were modeled after the Rand scale, consisting both of general teaching efficacy and personal teaching efficacy items. The following is an example of a teacher efficacy item: 'I feel confident that I can provide a classroom environment that supports my learners' development of learning-related skills.' A Cronbach alpha was calculated ( $\alpha = .12$ ) indicating poor internal consistency for the factor.

### **Summary**

Historically, the kindergarten curriculum emphasized social-emotional development including interpersonal and learning-related skills. Since the implementation of NCLB, the kindergarten curriculum has incorporated more academic standards and goals thereby decreasing time to address learning-related skills. A triangulation mixed methods design was utilized to investigate pre-NCLB to post-NCLB kindergarten teachers' perceptions of the effect of learning-related skills on academic achievement. A sample (N = 30) of certified kindergarten teachers with one or more years of kindergarten experience was administered surveys. Concurrently, 30 participants from the larger sample participated in the qualitative (individual interviews) phase of the study. It was hypothesized that all teachers would rate learning-related skills as precursors to academic achievement; however, pre-NCLB teachers would rate learning-related skills as more important than their peers. The quantitative results suggested that there were no difference in kindergarten teachers' perceptions of the importance of learning-related skills. There also were no significant differences in how kindergarten teachers rated the importance of school readiness skill constructs (learning-related, interpersonal, academic). However, when asked to rank these skills regarding importance, there were significant differences between the two groups with pre-NCLB teachers identifying interpersonal skills as more important to school readiness than post-NCLB teachers and post-NCLB teachers indicating academic skills as more important than pre-NCLB teachers. No significant differences were found between the groups in regards to teachers' beliefs about achievement or teacher efficacy. Qualitative data revealed level 2 codes (follows directions, listens, sits still, stays on task, works cooperatively in groups, tells needs and thoughts, motivation) describing the learning-related skills that teachers identified as important for school readiness. Nine level 2 codes (builds confidence and motivation, foundation, helps access kindergarten curriculum, head start, increase learning capacity, not a determining factor, puts them behind, rate of learning, supports classroom management) emerged to describe teachers' perceptions of learning-related skills effects on academic achievement. Qualitative findings also revealed possible explanations for the lack of significance found between these two groups regarding the importance of learning-related skills.

## Means and Standard Deviations of Pre- and Post-NCLB Kindergarten Teachers' Perceptions of the Importance of Learning-related Skills to School Readiness

Qualitative data analysis comparing pre-NCLB teachers' perceptions to post-NCLB teachers' perceptions about the importance of learning-related skills to students' school readiness revealed a coding hierarchy containing two primary codes: learning-related school readiness skills and effects on academic achievement. There were seven level-two codes that fell under the learning-related school readiness skills code and included: follows directions, listens, sits still, stays on task, works cooperatively in groups, tells needs and thoughts, and motivation.

### Learning-related school readiness skills

When participants were asked to indicate skills, behaviors, and/or attributes that are important for kindergarten learners' school readiness and academic success, many of the teachers indicated learning-related skills as central to student entry-level success and academic achievement. The level-one code, learning-related school readiness skills, was defined as a set of skills that were important for children to possess at school entry in order to fully benefit from instruction and academically achieve.

**Follows directions.** This Level 2 code was defined as the learner's ability to understand and carry out directions given by the teacher. Follows directions was one of the most endorsed skills by pre-NCLB (6 out of 14 = 43%) and post-NCLB (8 out of 16 = 50%) teachers as an important school readiness skill.

**Listens.** This Level 2 code (listens) was defined as the learner's ability to listen, focus and pay attention in the classroom setting. This learning-related skill was valued by both pre-NCLB (6 out of 14 = 43%) and post-NCLB (8 out of 16 = 50%) teachers. One teacher stated that "...listening skills are probably the most important. I have noticed that students who can listen learn well and I think that's extremely important."

**Sits still.** This Level 2 code was defined as the learner's ability to remain seated and still for an appropriate period of time. Pre-NCLB teachers indicated the importance of this learning-related skill at a rate of 5 out of 14 (36%) and 4 out of 16 (25%) post-NCLB teachers reported learners' ability to sit still as important.

**Stays on task.** A teacher who reported this Level 2 code as important to school readiness is expressing the need for learners to be able to work through a presented task from start to finish or as long as expected by the teacher.

**Works cooperatively in groups.** Works cooperatively in groups (Level 2) was coded when teachers indicated that it is important for learners entering school to be able to work along with their peers. This code was utilized when participants reported that such skills as turn-taking and participating in a group is important as an entry-level skill. However, this learning-related skill was not frequently endorsed by the participants of this study. Only 2 out of 14 (14%) pre-NCLB teachers and 2 out of 16 (13%) post-NCLB teachers reported it as an important school readiness skill.

**Tells needs and thoughts.** Tells needs and thoughts (Level 2) was coded when teachers indicated that children entering kindergarten need to be able to express their needs and thoughts. Only two teachers in this study indicated this learning-related skill as important to school readiness. Both of these teachers were pre-NCLB (14%) teachers.

**Motivation.** One pre-NCLB (7%) teacher and one post-NCLB (6%) teacher indicated this as an important school-readiness skill. One teacher stated that learners "... have to have an interest in school, a willingness to try, a willingness to learn..."

**Effects on Academic Achievement.** The Level 1 code, effects on academic achievement, was defined as the resulting influences of early learning-related skills to learners' academic achievement. The following 10 Level 2 codes fell under this Level 1 code: builds confidence and motivation, foundation, helps access kindergarten curriculum, head start, increase learning capacity, not a determining factor, puts them behind, rate of learning, and supports classroom management.

**Builds Confidence and Motivation.** This Level 2 code indicated that possessing learning-related skills helps to build learner's confidence and motivation to learn. This code was only expressed twice in this study by two post-NCLB teachers (2 out of 16 = 13%).

**Foundation.** Teachers referred to learners with learning-related skills as having a foundation or the prerequisites for school and lifelong learning. Results indicated that 9 out of 14 (64%) pre-NCLB teachers and 8 out of 16 (50%) post-NCLB teachers indicated that learning-related skills were a foundation to learners' academic achievement.

**Helps Access Kindergarten Curriculum.** This Level 2 code indicated that entering school with learning-related skills considered to be prerequisites to kindergarten keeps learners on track to accomplish expected academic goals. Further, teachers reported that these learning-related skills and behaviors supported and helped students access the curriculum or presented material.

**Head Start.** This Level 2 code (head start) was discussed infrequently in this study being endorsed by only two pre-NCLB teachers out of 14 (14%) and none of the post-NCLB teachers. This code was defined as the indication that entering school with particular learning-related skills gives learners a head start.

**Increase Learning Capacity.** Increase Learning Capacity (Level 2) was coded when teachers indicated that a learning-related skill increased the learner's ability to learn or how much they learn. Teachers who expressed that learners were more successful and learned more if they have mastered certain learning-related skills were represented in this category. Thirty-six percent (5 out of 14) of the pre-NCLB teachers and 25% (4 out of 16) of the post-NCLB teachers in this study indicated that learning-related skills increase learner's learning capacity.

**Not a Determining Factor.** This Level 2 code was selected when teachers indicated that they did not perceive learning-related skills as a determining factor in learners' achievement. Only one teacher in each teacher group, pre- (7%) and post-NCLB (6%), expressed this viewpoint. The pre-NCLB teacher stated that "... while some... [learning-related skills] may impact... learning, I don't think it is a determining factor of ... academic achievement."

**Puts Them Behind.** This Level 2 code was selected when teachers indicated that learners entering school lacking in learning-related skills were starting off behind expectation and causing them to fall behind academically. Forty-three percent (6 out of 14) of pre-NCLB teachers and 38% (6 out of 16) of post-NCLB teachers in this study reported that learners who are still needing to develop appropriate learning-related skills tend to fall behind academically as a result.

**Rate of Learning.** This Level 2 code was selected when teachers indicated that learning-related skills affected learner's ability to complete assigned work and/or the rate in which they were able to work through material. Forty-three percent (6 out of 14) of pre-NCLB teachers and 31% (5 out of 16) of post-NCLB teachers indicated that learning-related skills affects learners' rate

of learning. One teacher indicated that “If a child is disruptive, and...not listening, umm, they don’t, they don’t get the directions of what they’re to do...so they’re setting themselves up for failure of finishing the task correctly.”

**Supports Classroom Management.** Under this Level 2 code teachers indicated that learning-related skills supported classroom management. This code was selected when teachers indicated that the development of learning-related skills helped their classroom structure to run more smoothly.

#### **Means and Standard Deviations of Pre- and Post-NCLB Kindergarten Teachers’ Rankings of School Readiness Skills**

A comparison of the pre- and post-NCLB teachers’ rankings of the 17 specific school readiness skill items indicated on the survey including learning-related, academic, and interpersonal skills was conducted via a ANOVA. First, the Borda count method was performed. A Borda count was assigned to each item based on its ranking. Each item was assigned a certain amount of points corresponding to the position in which it was ranked by the participant (i.e., an item ranked most important received 5 points, items ranked 2nd most important received 4 points, etc.). All items that did not rank in the top 5 received 0 points (Dym, Wood, & Scott, 2002). The results revealed a significant difference in the rankings of pre-NCLB and post-NCLB teachers on particular items (see Table 2), Wilks’  $\lambda = .650$ ,  $F(17, 79) = 2.504$ .

#### **Means and Standard Deviations of Pre- and Post-NCLB (No Child Left Behind) Kindergarten Teachers’ Rankings of Certain Skill Constructs**

The results revealed that pre-NCLB teachers ( $M = .93$ ) ranked interpersonal skills as more important to school readiness than did postNCLB teachers ( $M = .48$ ). In addition, post-NCLB teachers ( $M = .76$ ) ranked academic skills as more important to school readiness than did pre-NCLB teachers ( $M = .53$ ).

#### **Means and Standard Deviations of Pre- and Post-NCLB (No Child Left Behind) Kindergarten Teachers’ Perceptions of the Importance of Certain Skill Constructs**

**Setting Expectations.** In this Level 2 code teachers expressed the importance of setting the tone in their classroom and making learners aware of what was expected in terms of learning-related skills. In this study, 5 out of the 14 (36%) pre-NCLB teachers and 6 out of the 16 (38%) post-NCLB teachers indicated that it was their role to set expectations for their learners to help them develop learning-related skills.

**Teaching.** This Level 2 code was selected when teachers indicated that it was their role to teach learning-related skills directly, reporting that some learners come in “not having a clue about it [learning-related skills].” Only 5 out of 14 (36%) pre-NCLB teachers in this study indicated that direct instruction of learning-related skills was a part of their role as a teacher, while 9 out of 16 (56%) of post-NCLB teachers reported that directly teaching these skills was their obligation.

**Modeling.** This Level 2 code was selected when indicated that it was the teacher’s responsibility to go a step beyond giving learners expectations and demonstrate expectations by modeling the skills for them. Only 5 out of 14 (36%) pre-NCLB teachers indicated that modeling was their responsibility, while 10 out of 16 (63%) post-NCLB teachers reported it as part of their role as a teacher.

**Providing guidance.** The teachers that expressed this Level 2 code indicated that it was the teacher’s responsibility to take learners through the process step by step in learning these skills. In this study, 5 out of 14 (36%) pre-NCLB teachers and 4 out of 16 (25%) post-NCLB teachers in this study.

**Preparing Students for Future.** This Level 2 code was selected when teachers indicated that the teacher’s role in developing learners’ learning-related skill was to prepare them for the future by building foundation. The data revealed 3 out of 14 (21%) pre-NCLB teachers and 3 out of 16 (19%) post-NCLB teachers reported that it was their role to prepare learners for future academic endeavors and experiences beyond school. Kindergarten teachers reported that learners will need these skills to be successful in later grades as well as in life.

**Notifying Parents.** This Level 2 code was selected when teachers indicated that it was the teacher’s responsibility to talk to parents about their expectations of learners in the area of learning-related skills and seek their assistance in the teaching and reinforcing of those skills at home. The data revealed that none of the pre-NCLB teachers reported soliciting parent involvement to support them in the instruction of learning-related skills, while 3 out of 16 (19%) post-NCLB teachers reported this as one of their responsibilities.

#### **The Relationship of Learning-Related Skills to Academic Achievement**

Learning-related skills play a significant role in the attainment of academic achievement. These skills have been found to affect both early school success (McClelland et al., 2006) and future academic outcomes. Learning-related skills are linked to a child’s academic success by providing the foundation for positive classroom behavior and setting the stage for later social behavior and academic performance.

#### **Perceptions of Kindergarten Teachers about the Importance of Learning-Related Skills**

More than three-fourths of the surveyed teachers indicated that children should be able to communicate needs, wants, and thoughts upon entering kindergarten and those learners should be enthusiastic and curious when approaching new activities. Further the findings revealed that kindergarten teachers reported that children needed to be able to follow directions, not be disruptive, and be sensitive to others feelings to be successful in school, all of which are learning-related social skills.

#### **Teachers’ Perceptions of Efficacy in Learning-Related Skills Instruction**

Data was gathered through three questionnaires administered to 25 teachers immediately following a four day staff development program on cooperative learning. Results indicated that experience was negatively correlated with their sense of general teaching efficacy ( $r = -.50$ ) and to their ratings of importance of implementing instructional innovation ( $r = -.57$ ). However, experience was positively correlated with teachers’ ratings of the difficulty of using the innovation ( $r = .43$ ). The teachers’ sense of personal teaching efficacy was found to be positively correlated with their ratings of the innovation as congruent with their current practices ( $r = .62$ ), less difficult to implement ( $r = -.39$ ), and important to use ( $r = .55$ ).

## Conclusions

### Learning-related school readiness skills

The level-one code, learning-related school readiness skills, was defined as a set of skills that were important for children to possess at school entry in order to fully benefit from instruction and academically achieve. Specific learning-related skills indicated by the teachers were described in greater detail in the analysis of the level-two codes below.

**Follows directions.** Follows directions was one of the most endorsed skills by pre-NCLB and post-NCLB teachers as an important school readiness skill.

**Listens.** This learning-related skill was valued by both pre-NCLB and post-NCLB teachers. One teacher stated that "...listening skills are probably the most important. I have noticed that learners who can listen learn well and I think that's extremely important."

**Sits still.** Pre-NCLB teachers indicated the importance of this learning-related skill at a rate of 5 out of 14 (36%) and 4 out of 16 (25%) postNCLB teachers reported learners' ability to sit still as important.

**Stays on task.** A teacher who reported this Level 2 code as important to school readiness is expressing the need for learners to be able to work through a presented task from start to finish or as long as expected by the teacher.

**Works cooperatively in groups.** This code was utilized when participants reported that such skills as turn-taking and participating in a group is important as an entry-level skill. However, this learning-related skill was not frequently endorsed by the participants of this study.

**Tells needs and thoughts.** Only two teachers in this study indicated this learning-related skill as important to school readiness. Both of these teachers were pre-NCLB (14%) teachers.

**Motivation.** One teacher stated that learners "... have to have an interest in school, a willingness to try, a willingness to learn..."

**Effects on Academic Achievement (Level 1).** The following Level 2 codes fell under this Level 1 code: builds confidence and motivation, foundation, helps access kindergarten curriculum, head start, increase learning capacity, not a determining factor, puts them behind, rate of learning, and supports classroom management.

**Builds Confidence and Motivation.** This Level 2 code indicated that possessing learning-related skills helps to build learner's confidence and motivation to learn. This code was only expressed twice in this study by two post-NCLB teachers (2 out of 16 = 13%).

**Foundation.** Results indicated that 9 out of 14 (64%) pre-NCLB teachers and 8 out of 16 (50%) post-NCLB teachers indicated that learning-related skills were a foundation to students' academic achievement.

**Helps Access Kindergarten Curriculum.** Teachers reported that these learning-related skills and behaviors supported and helped learners access the curriculum or presented material.

**Head Start.** This Level 2 code (head start) was discussed infrequently in this study being endorsed by only two pre-NCLB teachers out of 14 (14%) and none of the post-NCLB teachers.

**Increase Learning Capacity.** Teachers who expressed that learners were more successful and learned more if they have mastered certain learning-related skills were represented in this category.

**Not a Determining Factor.** Only one teacher in each teacher group, pre- (7%) and postNCLB (6%), expressed this viewpoint. The pre-NCLB teacher stated that "... while some... [learning-related skills] may impact...learning, I don't think it is a determining factor of ... academic achievement."

**Puts Them Behind.** Forty-three percent (6 out of 14) of pre-NCLB teachers and 38% (6 out of 16) of post-NCLB teachers in this study reported that learners who are still needing to develop appropriate learning-related skills tend to fall behind academically as a result.

**Rate of Learning.** Forty-three percent (6 out of 14) of pre-NCLB teachers and 31% (5 out of 16) of post-NCLB teachers indicated that learningrelated skills affects learners' rate of learning. One teacher indicated that "If a child is disruptive, and...not listening, umm, they don't, they don't get the directions of what they're to do...so they're setting themselves up for failure of finishing the task correctly."

**Supports Classroom Management.** Under this Level 2 code teachers indicated that learning-related skills supported classroom management. This code was selected when teachers indicated that the development of learning-related skills helped their classroom structure to run more smoothly.

## Recommendations

The policy recommendations offered in this brief emanate from basic understandings and findings from the research on early literacy.

1. Literacy development starts early in life and is highly correlated with school achievement. All the domains of a child's development, including literacy, are interrelated and interdependent. The more limited a child's experiences with language and literacy, the more likely he or she will have difficulty learning to read.
2. Well-conceived standards for child outcomes, curriculum content, and teacher preparation help establish clarity of purpose and a shared vision for early literacy education. Early literacy curricula and teaching practices should be evidence-based, integrated with all domains of learning.
3. States and districts should establish standards for early literacy that are articulated with K-12 programs and reflect consistency and continuity with overall program goals. At the same time, programs should be designed to provide comprehensive support for all children, including English Language Learners.
4. In many instances, this may require major changes in policies involving standards and accountability for children, programs and the professionals responsible for them. Competent leadership in the policy arena is essential. As Roskos and Vukelich aptly state, "What early literacy policy accomplishes in the next decades depends not only on the structures placed on and in settings and

programs, but also on the people who act on those structures to create patterns of activity that can either advance, resist or stall change."

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