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Do Kindergarten Readiness Screenings Predict Academic and Social Success?

Abstract

This action research study investigated the correlations between kindergarten readiness screening scores and kindergarten academic success, kindergarten social success, and third grade academic success. The participants included eighteen students who were given a readiness screening prior to kindergarten entry. These participants continued to be enrolled in the same school and were given a standardized academic test at the end of third grade. Additionally, kindergarten screening scores were compared to teacher surveys rating the participants' academic and social ability in kindergarten. The screening scores were also compared to find if a correlation existed between the kindergarten screening scores and the third grade standardized test scores. The screening scores were divided into high, middle, and low groups and were compared to the third grade test scores. The results suggested a trend that the third grade participant academic scores remained in the high and/or middle group, or low group as was their initial kindergarten readiness screening score. The compiled results of this study suggest that a kindergarten readiness screening is a useful tool in identifying students who likely will remain in the top two-thirds of their class on a third grade standardized test, as well as those students who may need additional academic support throughout their school years.

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Do Kindergarten Readiness Screenings Predict Academic and Social Success?

by

Lori Schaap

B.A. Trinity Christian College, 1983

Action Research Report

submitted in Partial Fulfillment
of the Requirements for the
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Department of Education
Dordt College
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(May, 2018)

KINDERGARTEN READINESS SCREENINGS

Do Kindergarten Readiness Screenings Predict Academic and Social Success?

by Lori Schaap

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Abstract

This action research study investigated the correlations between kindergarten readiness screening scores and kindergarten academic success, kindergarten social success, and third grade academic success. The participants included eighteen students who were given a readiness screening prior to kindergarten entry. These participants continued to be enrolled in the same school and were given a standardized academic test at the end of third grade. Additionally, kindergarten screening scores were compared to teacher surveys rating the participants' academic and social ability in kindergarten. The screening scores were also compared to find if a correlation existed between the kindergarten screening scores and the third grade standardized test scores. The screening scores were divided into high, middle, and low groups and were compared to the third grade test scores. The results suggested a trend that the third grade participant academic scores remained in the high and/or middle group, or low group as was their initial kindergarten readiness screening score. The compiled results of this study suggest that a kindergarten readiness screening is a useful tool in identifying students who likely will remain in the top two-thirds of their class on a third grade standardized test, as well as those students who may need additional academic support throughout their school years.

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Entering kindergarten is a major milestone for young children and the successful transition into the formal school setting is of great importance in the life of a child. The kindergarten year is a time to enhance children's early learning by fostering their love of learning and independence through the teaching of foundational skills and developing knowledge necessary for academic success in the early grades (Vecchiotti, 2001).

Children in the United States generally begin their school journey when they are five years old. Reaching the chronological age of five years by a state specified cut off date is the only official criterion for public school admittance. According to the National Center of Education Statistics (2018), those dates vary by state, and range from turning five years of age on or before July 31st to January 1st of the kindergarten year.

Chronological age is a convenient measure for kindergarten entrance; however, that age may be different than a child's developmental age. In the early 20th century, Dr. Arnold Gessel developed the maturational-developmental theory, which continues to be used by pediatricians and psychologists today. Gesell found that children develop in similar and predictable sequences and that each child moves through these sequences at his or her own rate. (Gesell Institute of Child Development, 2013).

Meisels (1998) discussed other views of readiness along with Gessel's theory. They include the environmentalist view, which supports kindergarten readiness when certain pieces of knowledge have been taught to the child, such as colors, letters and counting. The social constructivist view considers readiness the responsibility of the community. And the interactionist view moves the responsibility of readiness to the school to meet the child where he is and begin education at that point (Meisels, 1998). Although the interpretation of these views is

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outside the scope of this research study, each view has merit and adds an interesting and necessary thought process to the concept of readiness.

According to Shields, Cook and Greller (2016), 73% of public schools reported using some form of a kindergarten entry assessment. Some schools use the kindergarten readiness screening to identify special needs so that proper classroom placement can be implemented prior to the start of the school year. Some schools use the screening information as a starting point for student instruction. The majority of administrators reported using the readiness screening score to provide “individualized instruction” for students. There was no definition of “individualized instruction” given on the survey and the interpretation of such a term is open to a variety of definitions. (Shield, Cook & Greller, 2016)

Public schools in the United States are required to admit a student who has met the age cut-off date; however, private and parochial schools may have more discretion regarding students they choose to admit. Private schools often have limited resources, so an accurate screening of a potential student’s ability and developmental readiness takes on an important role. Private schools that do not have sufficient staff to meet special academic or behavioral needs cannot accept students with such needs. Such schools may use a readiness screening tool in order to determine developmental readiness, but also as a way to discover more serious educational needs that the school is unable to meet.

The kindergarten readiness assessment is also an important tool in discovering potential students who may not have the maturity level needed to adequately handle the rigors of a full-day kindergarten class. Lack of intelligence and/or academic ability is generally not in question, but rather the student’s ability to succeed within the confines of the kindergarten classroom. When a student does not meet the maturity or readiness standard, delayed entrance or

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provisional entrance become possibilities for kindergarten placement. Often, an extra year spent in preschool along with another year of maturing and developing can improve the low score. Other times, the score is low and the student is admitted with the knowledge that repeating kindergarten is a strong possibility.

Determining the developmental stage of incoming kindergarten students is a necessary and important piece of information about a child's school readiness. The appropriate development of social-emotional and self-regulation behaviors, combined with appropriate academic ability, lead to a successful kindergarten experience. (Harris, 2007). The screening score alone is not enough to determine the child's readiness level; however, the combination of an appropriate developmental screening tool, knowledgeable screeners, along with parental, and early childhood educators' opinions combine to make a wise decision about a child's readiness level. When that readiness is apparent, a successful kindergarten experience is generally the result.

Problem

Kindergarten readiness is a complex concept linked to multiple meanings and factors. Chronological age, developmental stage, academic and social skill, as well as home and school connections are associated with readiness (Hatcher, Nuner & Paulsel, 2012). Gesell's maturational-developmental theory explains that readiness is a factor comprised of both internal and external factors. The internal factors include genetics, temperament, personality, learning styles as well as physical and mental growth. At the same time, development is also influenced by environment, family background, parenting styles, cultural influences, health condition and early experiences with peers and adults (Gesell Institute of Child Development, 2013).

Schools, teachers and parents all desire for all students to experience success during the first year of their educational journey. Students develop many attitudes and beliefs during the

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kindergarten year that may endure throughout the following school years. Appropriate school readiness is important to building a strong foundation, which contributes to later school success. When a child enters a school setting for which he/she is not “ready”, undesirable effects can follow the student throughout their school years. Looking at the correlation between kindergarten screening scores and kindergarten success is an important area to research. When an effective screening tool is used, which carefully assesses kindergarten readiness, the number of students who have an unsuccessful experience in kindergarten may be lessened and the rate of students repeating kindergarten may also be lowered. In addition to considering if kindergarten screenings are accurate predictors of kindergarten success, it is also important to consider if that readiness screening is correlated with later school success.

Research Questions

This research study sought to address the following questions:

1. Do kindergarten readiness screenings predict academic success in kindergarten?
2. Do kindergarten readiness screenings predict social success in kindergarten?
3. Do kindergarten readiness screening scores correlate with third grade academic success as measured by standardized test scores?

Definitions

The following terms have many definitions in the educational field. Unless otherwise noted, the following definitions of the author. For the purpose of this study, they are defined as follows:

Kindergarten readiness – the combination of knowledge, skills, and behaviors that a child should possess as they enter the school environment (Brotherton, Hektner, Hill & Saxena, 2015).

Kindergarten social success – the ability of a child to successfully navigate the kindergarten

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social experience. Social success includes the ability to make and maintain friendships, lessen or extinguish emotional outbursts and/or breakdowns, flexibility, and adaptability to new situations.

DRS – Developmental Readiness Screening, Revised – 2nd Edition. This screening tool assesses three major areas, which include motor, general knowledge/concepts and personal-social. Those three areas are broken down into eight behavioral areas representing skills considered necessary for success at the kindergarten level. These behavioral areas include: fine motor, visual motor, numbers, concepts, body image, language, personal/social and gross motor skills. (Ball, 1993)

Terra Nova 3 - a standardized achievement test published by CTB/McGraw-Hill. This is a standardized achievement test which measures mastery in the core subjects including: reading, language, mathematics, science and social studies. (Purposeful Design Publications, 2011)

Review of the Literature

As a child's fifth birthday approaches, there is an expectation that the child will be enrolled in kindergarten and begin the school journey. Though it is of limited educational value, chronological age is used as the first criterion for school entry because it clearly establishes when the state must provide education services for children and it is administratively convenient (Gray, 1985). Despite the fact that the child has met the age requirement, many parents and educators seek the answer to the question, "Is this child ready for kindergarten?" Parents wonder if they have adequately prepared their child for school. Educators wonder if the students coming into their classrooms are ready for the tasks and demands of kindergarten. Kindergarten readiness is a complex idea with a great variety of meanings. Understanding what kindergarten readiness entails within a specific school system is a good first step in answering the question of the child's readiness.

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At the Education summit of 1989, in Charlottesville, Virginia, U.S. President George H.W. Bush presented six educational goals in an effort to improve American education at all levels. The first goal stated “all children in America will start school ready to learn” (National Education Goals Report, 1991). This simple, worthwhile, and admirable goal changed the landscape of kindergarten entrance significantly. Kindergarten readiness needed a definition and that readiness needed to be measured in order to fulfill that goal. Although the debate continues around the definition of readiness, studies show that teachers have definite ideas of what is needed by kindergarten students to be ready for today’s kindergarten (Johnson, Gallagher, Cook & Wong, 1995; Smith, 2005).

There are specific abilities that kindergarten screeners are looking for to ascertain appropriate readiness for kindergarten. Those specific abilities vary by area, region, school, and even teacher. Johnson, Gallagher, Cook and Wong (1995) conducted a research project that asked 176 kindergarten teachers, from a variety of school settings, what they felt were the most important skills that an incoming kindergartener should possess. A survey of 149 skill items in six domains was presented to the teachers to rank within each domain. After several analyses were conducted by the researchers in narrowing down the skills, it became clear that the kindergarten teachers had identified critical skills for children that consisted of independence, rich communication ability, and social skills that enable the child to get along with peers and adults (Johnson, et al. 1995).

Research findings of twenty-two suburban kindergarten teachers created a list of five skills that were deemed necessary for kindergarten success. The list included the following skills: the ability to sit and listen for fifteen minutes, the ability to respect/get along with peers, the ability

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to follow one-to-three step directions, appropriate classroom behavior, and personal responsibility/ability to communicate needs (Smith, 2005).

In each of the previous studies concerning necessary skills for kindergarten readiness, academic skills were not identified as a top skill that kindergarten teachers were looking for in an incoming student. The Johnson, Gallagher, Cook and Wong study (1995) suggested 149 skills and the kindergarten teachers ranked each skill within each domain. Academic skills, such as knowing letters, counting to 20, and writing names were not listed as necessary before kindergarten. The Smith study (2005) simply asked kindergarten teachers what skills they considered necessary and while academic skills were mentioned they did not top the list of necessary skills to possess prior to kindergarten.

In order to attain the goal of readiness for all American children, it became necessary to measure readiness. Among the many screening tools available, two main types of screening assessments emerged. Gredler (1997) described the first screening type as a developmental screening measure. The development screening tools are designed to assess development of the child's potential to acquire skills as they enter the schooling process. The Gesell School Readiness test and the DRS fall into this category. The second type of screening assessment is a readiness measure. This type of screening assesses the skills that have already been taught and are related to beginning instruction (Costenbader, Rorher, & Difonzo, 2000). The Brigance and DIAL-4 tests fall into this category.

The DRS is a developmental screening tool that assesses three major areas: motor, general knowledge/concepts and personal-social development. The DRS seeks to quickly assess, in a 15-20 minute session, the student's ability as compared to the five-year-old developmental standard. The DRS is a scripted evaluation; however, it allows the examiner to follow up on vague or

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incomplete answers given by the students. The examiner also notes the student's behavior during the screening. This informal observation presents additional information on a student's readiness for school. The purpose of the DRS is to find the child's place in the sequence of development (Ball, 1993).

The Brigance Early Childhood Screen II is a readiness tool. It, too, is a quick assessment of 10-15 minutes that identifies student readiness. The Brigance Screening Tool assesses fine and gross motor ability, language development, academic and cognitive ability as well as self-help and social/emotional ability. This screening tool identifies students who are at-risk and who need further evaluation, as well as those who are above level and may benefit from enrichment (Curriculum Associates, n.d.).

Another readiness screening tool is the Developmental Indicators for the Assessment of Learning, 4th edition, commonly known as the DIAL-4. The DIAL-4 screen is a 35-40 minute screening that provides scores in five developmental areas. These areas include: motor skills, language skills, concept development, self-help development and social development. This screening tool seeks to determine the strengths and needs of children from age 2.6 to 5.11. DIAL-4 also offers a Speed Dial screening that assesses large groups of children in 20 minutes in similar areas of development (Pearson, 2018).

In the late 1980's, kindergarten screenings were at their peak. Only three states reported not using pre-kindergarten or pre-first grade screenings; however, there was no control or uniformity over the screenings that dictated a child's future. The intent of using the screenings was to identify students who had learning difficulties and further test them; however, the results were more commonly used to delay kindergarten for a year or for placement in a developmental kindergarten (Shepard, 1997).

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Kindergarten screenings came under attack for being used for unintended purposes. Researchers found that testing young children is inherently inaccurate as compared to testing older children and adults (Shepard, 1997). The teachers administering the screenings were not properly trained to administer the screening or interpret the results. Many of the screenings that were being used were developed in the 1930's and were no longer supported by newer research. As a result, many states discontinued the use of kindergarten screenings (Shepard, 1997).

Currently, the Illinois State Board of Education has developed and adopted a developmental scale called KIDS- Kindergarten Individual Development Survey (ISBE, 2017). This screening is not an early developmental screening, but rather a continual developmental assessment throughout the kindergarten year. All Illinois public schools are required to have kindergarten teachers observe and document each kindergarten student on four key domains: approaches to learning and self-regulation, social and emotional development, language and literacy development, and cognition: math. Teachers observe and rate students in each of these domains three times during the year: in the first 40 days, at about day 102, and again at day 170. Teachers document student actions on a sliding scale from "building skill" to "integrating skill" through daily observation and anecdotal information. This developmental continuum effectively paints a picture of the students' developmental progress throughout the kindergarten year. This assessment is an effective measure of student progress throughout the kindergarten year (ISBE, 2017).

The Shields, Cook and Greller (2016) study found that schools reported using the results of kindergarten readiness assessments to individualize instruction (93%) and to identify students who needed additional testing (65%). Assessment scores were also used to determine classroom placement (41%) and to advise parents about delayed entry (24%). Administrators noted that the

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entry assessment scores were used for “individualized education,” however, a definition of the term was not given and therefore, open to a wide variety of interpretation.

There are both benefits and risks to using readiness assessment information in public schools. Muenchow (2003) discussed potential benefits and purposes to use readiness assessments including identifying children with special needs or health conditions, individualizing and improving instruction, evaluating program effectiveness, and obtaining benchmark data on the status of children at the local and state level. Muenchow (2003) also listed and discussed risks involved with readiness assessment screenings. Those risks include drawing inappropriate conclusions from misleading data, diverting resources from program expansion and improvement to assessment, denying children placement in kindergarten, punishing programs for serving the most disadvantaged children.

In an attempt to develop a universal kindergarten readiness assessment tool, a school district in California, developed the Kindergarten Student Entrance Profile (Lilles, Furlong, Quirk, Felix, Dominguez & Anderson, 2007). The KSEP involved early education professionals, such as preschool, Headstart, and kindergarten teachers. Those teachers were properly trained on the content areas that were to be assessed, and the rubrics used to assess them. The teachers observed children in the school setting over a period of three weeks and were trained on how to give a final assessment of a student’s behavior and performance (Lilles, et al., 2007). Using the KSEP screening was showing promising results and a moderate correlation to first and second grade reading fluency tests. The Lilles, et al. study found the KSEP screening tool to have promise “as a part of a multi-gating assessment process...and would serve as a first level universal screener of all entering kindergarten students” (2007, p. 77).

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A major goal of educators is for students to have a successful educational experience at all levels. Educators and parents agree that a student exhibiting happiness about school is an important indicator of school and social readiness (Mirkhil, 2010). Identifying those students with low scores on screening tools and providing appropriate interventions prior to entering kindergarten have shown to improve general school success (Lilles, et al. 2009).

Methods

Participants

Participants for this study included students from a small, private school, located in the Midwest, who were administered the DRS screening prior to the beginning of their kindergarten year and who continue to be enrolled at the same school and have third grade end of year Terra Nova scores available. Eighteen participants, eleven girls and seven boys, met the above stipulations. Sixteen participants are Caucasian, one Chinese and one Pacific Islander. All of the participants use English as their primary language.

Materials

The following measurements tools were used in this study to explore the correlation between kindergarten screening tools and academic success. The Developmental Readiness Scale-Revised (2nd edition) development screening tool was administered to measure the student's readiness for school success. Each screening takes approximately twenty minutes in a one-on-one setting. Concepts that are evaluated include fine motor, visual motor, numbers, concepts, body image, language, personal-social, and gross motor skills. The Terra Nova 3 (ACSI Edition) Complete Battery is a standardized test that is administered at the end of the third grade year. It is a timed assessment with content that includes reading, language, mathematics, science and social studies.

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Surveys were given to the kindergarten and third grade teachers of each participant in order to identify perceived academic and social success. The survey was a Likert-type, forced choice scale. Seven questions were presented: one concerning academic success, two concerning social success and four follow-up, open-ended questions. Teachers were asked to rate the participants on their academic success, social success and on the participants' ability to make friends. For the purposes of this study, social success included the ability to make and maintain friendships and a generally successful experience in the social arena of each grade level. Teachers were also asked if the participant had been diagnosed with a learning disability and/or attention disorder. The surveys are located in Appendix A.

Design

This research study was a correlational study that incorporates both quantitative and qualitative aspects. The quantitative aspects included the scores on the DRS and the Terra Nova tests. The kindergarten screening scores were divided into three groups: the high, middle and low groups. Each scoring group was compared with the result that pertained to that specific research question. The qualitative portion included teacher surveys that were given to the kindergarten and third grade teachers of the participants.

The DRS screening tool was administered to incoming kindergarten students during the spring prior to kindergarten. This screening measured the students' developmental readiness level. The Terra Nova standardized test was administered at the end of the participants' third grade year. This test measured the participants' academic ability.

Results of the DRS screenings were compared to the kindergarten teacher survey to look for a correlation that may predict academic success in kindergarten. The results of the DRS were then compared with the kindergarten teacher survey to look for a correlation that may predict social

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success in kindergarten. DRS scores and Terra Nova scores were compared to find if any correlation existed between the kindergarten screening and third grade academic ability.

Procedure

This researcher formally asked permission of school administration to access student files to determine students who had both of the necessary test scores. After permission was granted, twenty-six potential participants were identified. An email consent form was sent to parents of the twenty-six potential participants asking for permission to look in their child's school file in order to find and use the kindergarten readiness score and the third grade Terra Nova score for research purposes. The consent form, located in Appendix 2, was available to be printed by the parent and returned to the researcher. The choice of returning the email giving consent was also available as an option. Consent was received from eighteen parents within the one-week time frame. Student files were pulled for each of the participants, and the kindergarten readiness score and the third grade Terra Nova scores were recorded. The scores were divided into groups of the high scores, middle scores and low scores. A paired t test was used to look for correlation between each of the DRS scoring groups and the corresponding Terra Nova scores.

The second portion of the research gathered teacher perceptions of participant academic and social success in both kindergarten and third grade. Surveys were given to the kindergarten teachers and the third grade teachers of each of the participants. The surveys were returned within one week to the researcher. There was a provision for an informal interview with the teachers to clarify any information on the surveys; however, none was needed. Scores were given to the teacher answers on the surveys. Three points were given for "strongly agree" answers, two points for "agree" answers, one point for "disagree" answers and zero points for "strongly

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disagree” answers. The points for each participant were totaled from the kindergarten teacher and from the third grade teacher. A paired t test was then conducted to look for correlation.

Results

DRS scores and third grade Terra Nova scores were gathered from school student files and separated into three categories based on the DRS scores. The high-scoring group had DRS scores 86% and above. This group included six of the eighteen participants. The middle-scoring group had DRS scores between 80% and 85%. This group included seven of the eighteen participants. The low-scoring group had DRS scores between 70% and 73%. This group had five participants.

Table 1

DRS Scores Divided into Scoring Groups

High Scoring Group DRS scores	Middle Scores Group DRS scores	Low Scoring Group DRS scores
90	85	73
89	85	73
89	85	72
89	85	72
88	85	70
86	81	
	80	

Research Question One

The first question this researcher asked was the following: Do kindergarten screenings predict kindergarten academic success? The scores from the kindergarten screening and the answers from the first question from the kindergarten teacher survey were gathered and compared.

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Table 2

Comparison of Kindergarten Screening Scores and Kindergarten Academic Success - High Group

DRS scores – high group	K academic success
90	3
89	2
88	2
88	3
86	3
86	3

Table 2 compared the percentage earned on the DRS screening and the score from the kindergarten teacher survey question concerning the participants' academic success in kindergarten. A score of three on the survey represented "strongly agree" and a score of 2 represented "agree" in response to the question concerning academic success. The average of teacher perception of academic success equaled 2.7 for the high scoring group.

Table 3

Comparison of Kindergarten Screening Scores and Kindergarten Academic Success - Middle Group

DRS scores – middle group	K academic success
85	3
85	3
85	2
85	2
85	3
81	3
80	3

Table 3 compared the percentage earned on the DRS screening and the score from the kindergarten teacher survey question concerning the participants' academic success in

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kindergarten. A score of three on the survey represented “strongly agree” and a score of 2 represented “agree” in response to the question concerning academic success. The average of teacher perception of academic success equaled 2.7 for the middle scoring group.

Table 4

Comparison of Kindergarten Screening Scores and Kindergarten Academic Success - Low Group

DRS score – low group	K academic success
73	1
73	2
72	1
72	2
70	2

Table 4 compared the percentage earned on the DRS screening and the score from the kindergarten teacher survey question concerning the participants’ academic success in kindergarten. A score of three on the survey represented “strongly agree”, a score of 2 represented “agree” and a score of 1 represented “disagree” in response to the question concerning academic success. The average of teacher perception of academic success equaled 1.6 for the low scoring group.

After looking at the scores of each group, the first research question, concerning kindergarten screenings ability to predict kindergarten academic success can be answered in the affirmative. The high and middle scoring groups both averaged a 2.7 score out of a possible 3 points. That number suggests that those participants had a successful academic year. The low scoring group averaged 1.6 out of a possible 3 points. This result suggests that the low scoring group’s academic success was lower than the other groups and the participants in this group tended to have a less successful academic year. This information suggests that a kindergarten screening is able to predict academic success during the kindergarten year.

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Research Question Two

The second question this researcher asked was the following: Do kindergarten screenings predict kindergarten social success? The scores from the kindergarten screening and the answers from the questions 2 and 3 from the kindergarten teacher survey were gathered and compared.

Table 5

Comparison of Kindergarten Screening Scores and Kindergarten Social Success - High Group

DRS scores – high group	K social success scores
90	6
89	3
88	6
88	4
86	6
86	5

Table 5 showed teacher perception of social success varied from 3 points to 6 points on a 6-point scale. A teacher survey response of “strongly agree” was worth 3 points, “agree” was worth 2 points, and “disagree” worth 1 point. The responses for questions two and three were added together to obtain the social success score. The average score for this group was 5 points.

Table 6

Comparison of Kindergarten Screening Scores and Kindergarten Social Success - Middle Group

DRS scores – middle group	K social success scores
85	6
85	6
85	4
85	4
85	6
81	6
80	6

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Table 6 showed teacher perception of social success varied from 4 points to 6 points on a 6-point scale. A teacher survey response of “strongly agree” was worth 3 points, “agree” was worth 2 points, and “disagree” worth 1 point. The responses for questions two and three were added together to obtain the social success score. The teacher perception of social skill in kindergarten was much more consistent in the middle group. The average for this group was 5.4 points on a six-point scale.

Table 7

Comparison of Kindergarten Screening Scores and Kindergarten Social Success - Low Group

DRS scores – low group	K social success scores
73	6
73	4
72	2
72	4
70	6

Table 7 showed teacher perception of social success varied from 2 points to 6 points on a 6-point scale. A teacher survey response of “strongly agree” was worth 3 points, “agree” was worth 2 points, and “disagree” worth 1 point. The responses for questions two and three were added together to obtain the social success score. The teacher perception of social skill in kindergarten was inconsistent in the low-scoring group. The scores ranged from 2 points to 6 points with the average for this group at 4.4 points.

The second research question, concerning a kindergarten readiness screening’s ability to predict social success in kindergarten is not definitive. The middle-scoring group scored higher socially than the high-scoring group and the low-scoring group had individual scores that ranged from the highest to lowest score noted. The answer to research question two is that kindergarten screenings do not accurately predict social success in kindergarten.

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Research Question Three

The third question this researcher asked was the following: Do kindergarten screening scores correlate with third grade standardized test scores? The scores from the kindergarten screening and the Terra Nova 3 scores were gathered and compared.

Table 8

Comparison of Kindergarten Screening Scores and Terra Nova Scores - High Group

DRS scores-high group	Terra Nova scores
90	74
89	76
88	78
88	67
86	94
86	91

The high scoring group had Terra Nova scores that ranged from the 67th percentile to the 94th percentile. The results of the paired t test showed the P value to be .1625 and was not statistically significant to indicate a positive correlation.

Table 9

Comparison of Kindergarten Screening Scores and Terra Nova Scores - Middle Group

DRS scores-middle group	Terra Nova scores
85	93
85	89
85	87
85	75
85	58
81	50
80	93

The middle scoring group paired t test revealed a .4058 p value and showed no statistical significance to prove correlation.

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Table 10

Comparison of Kindergarten Screening Scores and Terra Nova Scores - Low Group

DRS scores-Middle group	Terra Nova scores
73	80
73	34
72	46
72	26
70	74

The paired t test revealed a .1405 P value for the low group and showed no statistical significance between the DRS-R2 score and the Terra Nova score.

The third research question which asked if kindergarten screening scores correlated with third grade Terra Nova 3 scores is answered negatively. The DRS-R2 score of the participants did not accurately predict nor correlate with the third grade Terra Nova scores.

Discussion

Overview of Study

The main purpose of this study was to discover if readiness screenings given to incoming kindergarten students predict academic and social success. Three questions were asked concerning social and academic correlations to the readiness screening.

Summary of Findings

In the final analysis of this study the kindergarten screening was found to be a useful tool in some areas and not useful in other areas. When asking if the readiness screening predicted kindergarten academic success, the answer was yes. The students that scored in the top and middle DRS scoring groups, were academically successful in their kindergarten year. Those students who scored in the low group had a less successful academic experience in kindergarten.

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The readiness screening was found to not accurately predict the social ability of kindergarten students. The research results did not provide a link between the scores on the kindergarten screening and social success in kindergarten. Low kindergarten social skills appeared in every scoring group, as did high scores.

Finally, no correlation was found between kindergarten readiness scores and third grade standardized test scores, although some interesting trends were discovered. The high and middle scoring groups tended to score within the upper two-thirds of scores while the low-scoring group tended to also score low on the standardized test.

Recommendations

Overall, it was found that the results of the kindergarten screening are a valuable source of information for the teachers of kindergarten students. It was notable to this researcher that the kindergarten screening had value and should continue to be used as a acceptance tool. Kindergarten screenings are useful in identifying likely successful students, those who may struggle and need support to succeed in this school setting, and those who need more time to develop in order to succeed in kindergarten.

At the school where this research was conducted, a score of at least 70 percent is necessary for a student to be admitted to kindergarten. According to the above research, students who scored over 80 percent were academically successful during their kindergarten year. The concern of the researcher is for those students that obtained the 70 percent cut-off score, but only by a few percentage points. Those students tended to be less successful academically during kindergarten. The kindergarten experience can set the tone for the remainder of the student's school journey. Kindergarten teachers who are aware of low-scoring students can give extra

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support and encouragement to those students to help them be more successful in kindergarten. It would be beneficial for screening scores to be shared with kindergarten teachers.

It would be recommended that students with low screening scores, also be put on a watch list by the special needs department and their progress closely monitored. Three of the five participants in the low-scoring group are currently receiving services from the special needs department as fourth and fifth graders. The other two students in the low-scoring group were found to have extenuating medical circumstances. As those circumstances were addressed, the students improved their academic success.

Professional discernment should always apply when using the screening scores to further understand student ability. The scores should be seen as only one piece of information as teachers work with students. The scores are meant to assist teachers in helping students succeed, not as a judgement of future academic success. The research in this study showed that there is not a correlation between kindergarten screenings and later academic success, however, a trend was noted that higher scoring students tended to continue with higher scores on later standardized tests.

Limitations of Study

There are several limitations of this study that must be considered. The first limitation was the small participant group size. Although twenty-six students met the necessary requirements, only eighteen parents gave consent to participate. Student files may contain very sensitive information and some parents may not have been comfortable allowing the researcher access to such information. The small participant number also resulted from the fact that the school is relatively small and in a transient community. Many students move away before third grade and therefore were ineligible for the study. Eighteen participants is a very small participant number, however,

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due to factors beyond the researcher's control, the study was conducted with those participants. As a way to extend this study, a running record of students scores could be kept. A longitudinal study could then be conducted as the value of kindergarten screening scores with a much larger pool of participants over an extended period of time.

A second limitation was found on the teacher surveys. While the survey was the best format to gain social ability information, each teacher interpreted social ability according to his/her own definition. A more striking limitation was the fact that teachers were relying on their memories of students they had in their classrooms one to four years ago and asked to evaluate student social and academic performance. The surveys would be more accurate if teachers were asked for such information while students were still in their classrooms, however, time did not allow for an extended study. Gathering data yearly, to be used in a longitudinal study, would give a more accurate picture of student success levels both academically and socially.

A third and significant limitation of this study was the comparison of different types of scores. The kindergarten screening scores were calculated on a percentage basis of correct and incorrect answers. That percentage was used as a basis to separate the scores into the high, middle and low scoring groups. The Terra Nova test did not report a comprehensive percentage of correct and incorrect answers. The only comprehensive score reported was an overall percentile of the student scores. The percentile scores, although not mathematically usable, were used as a ranking of students amongst the group and compared to the high, middle and low scores of the kindergarten screening. The Terra Nova does report scale scores, which are even-interval scores and can be averaged mathematically, however scale scores are not easily usable in this type of research.

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Appendix 1 – Teacher Surveys**Kindergarten Teacher Survey**

1. Student was academically successful in Kindergarten.

Strongly disagree Disagree Agree Strongly agree

2. Student was socially successful in Kindergarten.

Strongly disagree Disagree Agree Strongly agree

3. Student made friends easily in Kindergarten.

Strongly disagree Disagree Agree Strongly agree

4. Was the student diagnosed with a learning disability before the end of Kindergarten?

Yes No

If yes, please explain.

5. Was the student diagnosed with an attention disorder before the end of Kindergarten?

Yes No

If yes, please explain.

6. Was the student diagnosed with an emotional disorder before the end of Kindergarten?

Yes No

If yes, please explain.

7. Are there any extenuating circumstances that may have affected the student's school performance? (e.g. immediate family member death, divorce, etc.)

Yes No

If yes, please explain.

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Third Grade Teacher Survey

1. Student was academically successful in 3rd grade.

Strongly disagree

Disagree

Agree

Strongly agree

2. Student was socially successful in 3rd grade.

Strongly disagree

Disagree

Agree

Strongly agree

3. Student made friends easily in 3rd grade.

Strongly disagree

Disagree

Agree

Strongly agree

4. Was the student diagnosed with a learning disability before the end of third grade?

Yes No

If yes, please explain.

5. Has the student been diagnosed with an attention disorder before the end of third grade?

Yes No

If yes, please explain.

6. Was the student diagnosed with an emotional disorder before the end of third grade?

Yes No

If yes, please explain.

7. Are there any extenuating circumstances that may have affected the student's school performance? (e.g. immediate family member death, divorce, etc.)

Yes No

If yes, please explain.

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Appendix 2 - Parent Consent form

I give my consent to Mrs. Lori Schaap to gather information about the DRS-R2 Kindergarten screening and the Terra Nova third grade scores from his/her JCS student file.

Student's name_____

Parent signature_____

Date_____