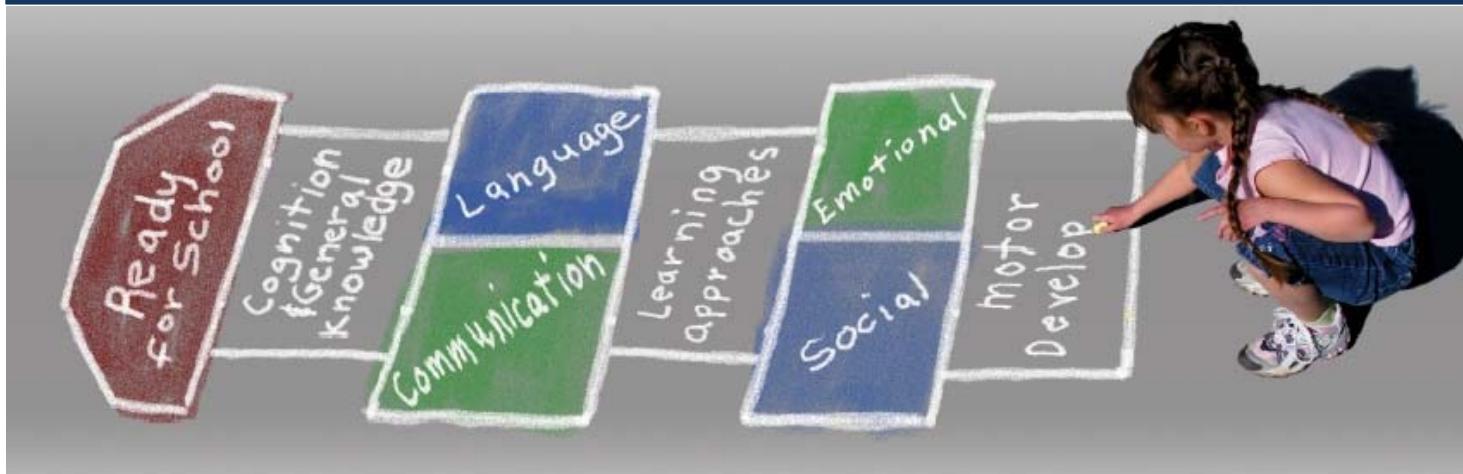


April  
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# Does Readiness Matter?

## How Kindergarten Readiness Translates Into Academic Success



Authored by:

Santa Clara County  
Partnership for School Readiness



Applied Survey Research



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# Executive Summary

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## Background & Purpose

Both San Mateo and Santa Clara counties have rich histories of school readiness assessment, and both counties know much about how proficient their children tend to be on readiness skills, who tends to be readier for school than others, and the child and family factors that are associated with heightened readiness. Because readiness assessments were started earlier in San Mateo County (in 2001 vs. in 2004 in Santa Clara County), children who were assessed in kindergarten in San Mateo districts are now in later elementary school; they have established a track record of academic achievement. Taking advantage of this opportunity, we used non-experimental, longitudinal readiness and achievement data from San Mateo County in order to move both counties from a sheer description of readiness to a much richer understanding of how – and where – readiness matters.

Research often shows that the skills that children possess in kindergarten are related to their academic achievement in later years of elementary school. Research also tends to show that school readiness gaps between different types of children persist in their academic scores years hence. This study was designed to explore how readiness is connected to later academic success locally, to measure the relative contributions of the *Basic Building Blocks* to understanding children’s academic test scores in third through fifth grade, and to examine the academic trajectories of four *Readiness Portraits*.

## Does Readiness Matter?

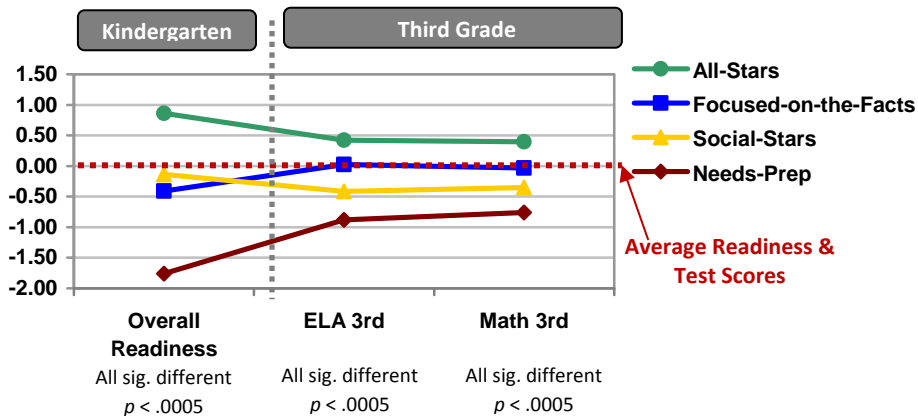
The answer to the “Does readiness matter?” question is a resounding “yes!” according to these data. Children who enter kindergarten near-proficient across all readiness skills (aka “*All-Stars*”) perform significantly better on standardized tests of English and math in third, fourth, and fifth grades than do children of different readiness profiles (see Figure A).

***This longitudinal study was designed to:***

- ***Examine how readiness is connected to later academic success***
- ***Determine which readiness skills matter most***
  - ***Chart the academic trajectories of All-Stars, Social-Stars, Focused-on-the-Facts, and Needs-Prep students***

***Does readiness matter? The findings clearly indicate, “Yes!”***

**Figure A: Size of the Readiness and Test Score Gaps at Kindergarten and 3<sup>rd</sup> Grade, By Readiness Portrait**



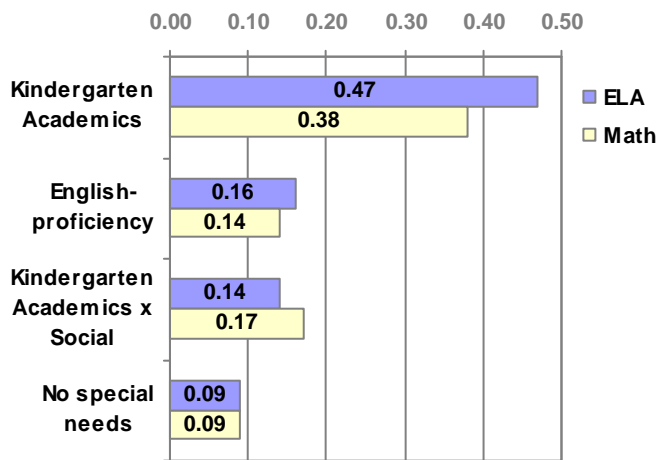
Note: Scores represent standardized z-scores so that gaps between readiness and academic test scores could be examined. Sample sizes for overall readiness, English scores, and math scores for each *Readiness Portrait* are as follows: *All-Stars*: 307, 307, 307; *Focused-on-the-Facts*: 180, 180, 179; *Social-Stars*: 125, 125, 125; *Needs-Prep*: 97, 96, 96. Differences in overall readiness, English scores, and math scores across the portraits were assessed via one-way analyses of variance. For overall readiness, English scores, and math scores, each *Readiness Portrait* is significantly different from each other *Readiness Portrait*. Changes from kindergarten readiness to English and math scores for each portrait were assessed via paired *t*-tests. *Needs-Prep* and *Focused-on-the-Facts* students showed significant increases, whereas *All-Stars* and *Social-Stars* posted significant decreases. For more information, see page 27 of this report.

Moreover, certain blocks of kindergarten readiness skills – and certain individual skills – are significantly associated with academic track records four years later. Children’s proficiency on *Kindergarten Academics* – especially their recognition of letters and engagement with books – is strongly associated with their performance in both English and math at third grade. Children who are not only proficient in *Kindergarten Academics* but are also on track with their *Social Expression* skills – especially their ability to express needs and wants, as well as their curiosity and eagerness for learning – display an extra boost in test scores four years later (see Figure B). Being able to focus attention on classroom activities at kindergarten also is a precursor for the development of proficiency in math at third grade.

**Children who are well-rounded at kindergarten entry – the All-Stars – are most academically successful in 3<sup>rd</sup> grade**

**More specifically, children proficient in Kindergarten Academics and Social Expression attain the highest test scores**

**Figure B: Results of Regression Analysis Using Readiness to Predict 3rd-Grade Standardized Test Scores in English Language Arts and Math**



Note: The numbers in the figure above represent standardized beta-weights. Regression models to predict ELA and math scores were both significant, with adjusted  $R^2$ s of .31 and .24,  $p < .0005$ , respectively. Each model is based on 607 students. For a full discussion of these figures, see pages 30-35 of this report.

### Are Gaps In Readiness Still Present At Third Grade? Are Gaps Closing For Any Students?

Gaps that were present at kindergarten between certain groups of children – children with and without preschool experience, for example, and English Learners versus children who are English-proficient – are still present at third grade. In most cases, the size of these gaps has remained stable. In other cases, however, the gaps are widening. In particular, the gaps between Caucasian and Asian students, who score well on standardized tests, vis-à-vis their Latino and Pacific Islander peers is growing due to improvements among the Caucasian and Asian populations.

### Implications for Early Childhood Education

After exploring the links between readiness and academic success, the final section of this report examines the child characteristics and early education experiences that are associated with heightened readiness. Preschool experience and experience with the Kickoff to Kindergarten (KTK) program (a summer transitional program typically targeted to children who are English Learners and children who have not had a preschool experience) are associated with higher levels of readiness on those skills that are linked to later success. It appears that children who have attended preschool and the KTK program enter kindergarten with higher scores in *Kindergarten Academics*, *Social Expression*, and focused attention. The importance of these early education experiences is underscored when we consider that is it proficiency in *Kindergarten Academics*, *Social Expression*, and focused attention that is associated with later academic success.

**Children who are behind on readiness scores tend to also be behind in academic achievement**

**Initial readiness gaps between preschoolers and non-preschoolers, and English Learners and English-proficient children, have not narrowed by 3<sup>rd</sup> grade**

**Initial readiness gaps between ethnic groups have widened by 3<sup>rd</sup> grade**

**Evidence suggests that experience in preschool and in summer kindergarten transitional programs prepares children in the most important readiness areas**



## Final Summary and Conclusions

The data are clear that the best outcomes flow to children who are well-rounded at kindergarten entry. *All-Stars* (children who are solid in their early academics as well as their social-emotional skills) significantly outscore their peers on English and math tests at third through fifth grades. Regression analyses show that academic achievement is closely connected to skills in *Kindergarten Academics*, but children who enter school knowing their letters and numbers and who have key expressive skills are those who do best. Strengths in the area of *Social Expression* also involve symbolic and imaginative play, which is instrumental to the development of impulse control and broader self-regulation abilities (Spiegel, 2008).

That said, we, like Duncan and his colleagues, were surprised that skills in the *Self-Regulation* area did not manifest stronger links to later achievement (Duncan, 2007), especially because *Self-Regulation* skills are consistently rated as critical to a smooth transition into kindergarten according to participating teachers (and consistent with national data). Though one might be tempted to interpret the strength of findings for *Kindergarten Academics* as support for programs that teach children their letters and numbers at even earlier ages, the authors would caution away from that interpretation. Indeed, recent evidence shows that arguably the most important role of early education may be to foster imaginative play, which is critical to the development of important cognitive skills like executive functioning and to the development of self-regulation (Bodrova, 2006; Speigel, 2008). Again, the data show that children with proficiencies across the varied readiness skills do best, suggesting that no *Basic Building Block* is unimportant. Thankfully, teachers who participate in the readiness assessments consistently indicate that *Kindergarten Academics* is easy to impact over the course of the kindergarten year. Perhaps extra effort needs to be taken during the months just prior to kindergarten entry, when children are presumably ripe to learn these concepts, to ensure that children acquire all of their letters, have more experiences with books, and know appropriate ways of expressing themselves. By bolstering these critical skills, it is possible that children may be better positioned for academic success.

**No Basic Building is unimportant to academic success – children with proficiencies in academics and social-emotional areas do best**

**Though Kindergarten Academics has the strongest associations with test scores, the solution is not drilling children on their letters and numbers at ever earlier ages**

**However, extra efforts to boost critical readiness skills during the summer prior to kindergarten may better position children for academic success**

# Introduction

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## Purpose of This Paper

According to common wisdom, school readiness matters – for children to succeed in school, they need to enter kindergarten with proficiency in a set of basic skills. Research has tended to bear out this wisdom, finding that gaps present in kindergarten school readiness are also present in academic achievement in later years. Both San Mateo and Santa Clara counties have embraced the importance of school readiness, and both counties have established a strong history of school readiness assessment. As a result, both counties possess a detailed understanding of the set of skills children possess as they enter kindergarten, gaps in readiness among different groups of children, and factors that support and hinder children’s readiness for school.

**The purpose of this report is to move both San Mateo and Santa Clara counties from a sheer description of readiness to a much richer understanding of how – and where – readiness matters.**

## Exploring Alternatives Views of the Importance of School Readiness

If readiness provides a critical foundation upon which subsequent learning is built, children who are most ready for kindergarten may also be those who are most academically successful in later school years. Children who enter kindergarten proficient on early literacy skills like letter recognition, and/or those who have solid language development, may also be those children who are poised to gain the most out of the information communicated by their teachers. Similarly, children who have social-emotional strengths may be able to successfully adapt to the classroom environment, participate in circle time, control their frustration, work with their peers, and properly focus their attention. Again, children with such skills may be better positioned to learn from formal instruction than children without such proficiencies. For these reasons, the skills children possess when starting kindergarten might result in different achievement patterns later in elementary school.

Alternatively, schools may be able to take the raw materials with which students enter at kindergarten and transform all students into effective learners. In other words, although children may differ in their skills at entry to kindergarten, schools may do a good job at compensating for these differences in the course of instruction. In this case, links between initial school readiness and long-term academic success would be greatly diminished, if present at all.

**In this paper, we examine these alternatives, exploring the connections between children’s skill sets upon entry to kindergarten and their academic success – according to standardized tests – several years later. More specifically, this paper:**

- Identifies readiness dimensions that are more (and less) closely linked to later

***Santa Clara County and San Mateo County have long histories of readiness assessment***

***Data represent students’ proficiencies on kindergarten readiness skills linked to their 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grade standardized test scores***

***Data come from 5 high-need districts in San Mateo County; findings may or may not reflect the links between readiness and academic success for other types of districts***

***This study moves both counties from a sheer description of readiness to insight into which skills matter most***

school success;

- Prioritizes readiness skills that appear more critical than others to long-term performance; and
- Explores achievement gaps.

## Connections Between Readiness and School Success – The Research Context

A fundamental belief of child development is that children build upon early skills in order to gain more complex concepts. Indeed, a growing body of research has found this to be true in studies of readiness and later achievement, demonstrating that children’s social and cognitive readiness for school acts as a “springboard” for later success in school. For example:

- Mastery of basic numerical concepts prepares children to learn more complex math problems and problem-solving approaches (e.g., Baroody, 2003).
- Le and his colleagues have found that both academic and nonacademic school readiness skills at entry to kindergarten were significantly related to eventual reading and mathematics achievement in fifth grade (Le, Kirby, Barney, Setodji, Gershwin, 2006).
- Raver and her colleagues have written extensively about the importance of children’s emotional and social skills to their early academic standing. Children who have difficulty paying attention, following directions, getting along with others, and controlling negative emotions of anger and distress tend to do less well in school (e.g., Raver & Knitzer, 2002; Raver, 2003).
- Other studies have also linked attention with later achievement, finding that the ability to control and sustain attention and participate in classroom activities is associated with achievement test scores in the early elementary grades (e.g., Alexander, Entwisle, & Dauber, 1993).

One of the most stringent and large-scale studies to explore the topic of school readiness and academic achievement was just published in fall 2007 by Duncan and his colleagues. According to Duncan, more research was needed because “although there are strong theoretical reasons to expect that individual differences in children’s early academic skills and behavior are linked to subsequent behavior and achievement, surprisingly little rigorous research has been conducted to test this hypothesis.” To fill this gap, Duncan and his colleagues published a meta-analysis of six longitudinal, non-experimental data sets exploring the connections between readiness and later achievement. These researchers found that the strongest predictors of later achievement were school-entry math, reading, and attention skills (in that order). To the authors’ surprise, measures of socioemotional behaviors were generally insignificant predictors of later academic performance. (Duncan, Claessens, Huston, Pagani, Engel, Sexton, Dowsett, Magnuson, Klebanov, Feinstein,

**Research shows that kindergarten readiness is a springboard to later academic success**

**However, there are a variety of findings around which pieces of readiness are most influential – support has been found for both academic and non-academic readiness skills**

**A recent and rigorous non-experimental study using longitudinal data found that the strongest predictors of later achievement were early math, reading, and attention skills (Duncan, et al, 2007)**

Brooks-Gunn, Duckworth & Japel, 2007).

Like the Duncan et al study (2007), the most rigorous studies are those with longitudinal data, in which the same children are assessed at kindergarten and also later in elementary school. However, a host of studies have also examined school readiness and achievement separately, finding gaps in readiness and gaps in later achievement among the same types of children. Such findings also suggest that readiness and achievement are connected. For example researchers from the RAND Corporation found that groups that performed less well on standardized tests in second and third grades also trailed on both cognitive and socioemotional readiness measures early in their kindergarten year (e.g., males, English Learners). In other words, these researchers found gaps on readiness measures and on achievement for the same types of children. However, their analysis was limited by lack of consistency in readiness measures, and they couldn't directly examine the contribution of readiness to understanding variation in achievement. (Cannon & Karoly, 2007).

From these studies and others, there is clear indication that school readiness matters. There is less agreement, however, on exactly which readiness skills matter most. Thanks to early readiness assessments conducted in San Mateo County – and the ability to match students' initial kindergarten readiness scores to their subsequent standardized testing track record, ASR was able to examine how readiness translates into academic success among local children.

## Using Data From San Mateo County

Under the auspices of Peninsula Partnership of Children, Youth, and Families and First 5 San Mateo County, ASR has conducted several school readiness assessments in San Mateo County. In 2001, 2002, and 2003, these readiness assessments were focused in eight school districts that were identified as high-need districts. In each assessment year, participating kindergarten teachers observed the students in their classrooms and reported the students' proficiency across several readiness skills. ASR collected a variety of information about these kindergarten students, including their unique student identifiers. Because San Mateo County uses the same unique student identifiers to track their students' academic performance in school, it has been possible to link kindergarten readiness scores with students' later academic success. Thus, the data contained in this report originated in the early San Mateo County assessments, with achievement data being provided over the past year by districts that participated in those assessments.

Thanks to the creation of this longitudinal data set, with readiness scores linked to subsequent achievement scores for the same children, ASR has been able to determine which readiness skills are connected to later academic success, and whether gaps that were present at kindergarten entry have shrunk over time. The following report section provides background information about the readiness assessment in San Mateo County before study results are discussed.

**To examine links between readiness and academic achievement for local children, ASR used data from San Mateo County for 2 reasons:**

**1) Assessments began in 2001, so assessed children have built a solid standardized-testing track record**

**2) San Mateo County uses unique student identifiers, making it possible to find students who had participated in readiness assessments several years later**

# Brief Background on School Readiness Assessment in San Mateo County

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In order for readers to properly evaluate this research, it is important to provide a brief background of school readiness assessment in San Mateo County. Below is provided:

- A basic overview of the **methodology**;
- Two sets of findings that are critical to understanding the results of this study: a description of the *Basic Building Blocks* of readiness, and a description of four *Readiness Portraits*. (Both of these concepts were developed subsequent to a 2004 readiness assessment in Santa Clara County, but results were found to apply to the early years of assessment in San Mateo County, as well.)

We should also note that readers interested in a description of ASR's more recent readiness assessment methodology should refer to Appendix 2.

## An Overview of the Best-Practice Methodology

The 2001, 2002, and 2003 readiness assessments in San Mateo County were commissioned by the Peninsula Partnership for Children, Youth, and Families (now part of the Silicon Valley Community Foundation). The Peninsula Partnership for Children, Youth and Families was a collaborative effort between Peninsula Community Foundation and San Mateo County to promote the well-being of children in San Mateo County from birth to age eight. The primary goals of the Partnership were preparing children for kindergarten and ensuring that children were successful in school, including reading proficiently by third grade.

Of particular concern to the Partnership were children entering kindergarten in eight relatively high-need districts in the county. The Partnership first desired a clear understanding of how these children were prepared for school. To fill this knowledge gap, the first three assessments were focused on the following eight districts in San Mateo County: Cabrillo Unified District, Jefferson School District, La Honda-Pescadero Unified District, Pacifica School District, Ravenswood City School District, Redwood City Elementary District, San Mateo-Foster City School District, and South San Francisco Unified District

In 2000, a school readiness methodology and set of assessment tools were created for use in San Mateo County. Reflecting a participatory process of development, teachers, funders, child development experts, and social researchers were all involved in identifying the key dimensions of school readiness that should be measured. In addition to their own wisdom and experience, the team also drew upon an extensive literature search of the

**Readiness assessments in San Mateo County were commissioned by the Peninsula Partnership for Children, Youth and Families**

**Assessments were focused in 8 relatively high-need districts**

**The assessment methodology and tools were created by a participatory process, informed by extensive literature reviews**

readiness assessment tools and thinking that existed at that time.

The core of the assessment was – and remains – the *Kindergarten Observation Form* – a list of 20 specific readiness skills (see Appendix 1). The *KOF* has good validity and reliability and has been successfully used in multiple-year readiness assessments in San Mateo, Santa Clara, and San Francisco counties in California, and in Lake County, Illinois. More information about the tool’s development and reliability / validity can be provided upon request.<sup>1</sup>

In 2001, 2002, and 2003, samples of classrooms were first drawn so as to be representative of the eight districts involved (see the *Methodology* section of this report for a profile of the districts that provided achievement data for this study). Participating kindergarten teachers were first trained on the assessment methodology and *Kindergarten Observation Form*. After observing their students during the first few weeks of the school year, these trained teachers rated their students’ proficiency across the 20 readiness skills. Importantly, all kindergarten students were assessed in their primary languages (if teachers were not fluent in the child’s primary language, a few language-dependent items were left blank). The rigorous assessment methodology furnished findings that generalized to all kindergarten students in the targeted population within a small margin of error.

### **The Basic Building Blocks of Readiness**

ASR has consistently found that readiness is best described by four dimensions that were analytically derived based on underlying patterns across the readiness skills (based on both exploratory and confirmatory factor analyses). These *Basic Building Blocks* of school readiness have emerged in each assessment and include *Self-Care & Motor Skills*, *Self-Regulation*, *Social Expression*, and *Kindergarten Academics*. For the analyses in this paper, we constructed the *Basic Building Blocks* from the individual skills listed in the table below. According to reliability analysis on the data included in this report, alpha coefficients were robust, ranging from .79 to .93.<sup>2</sup>

**Trained teachers use the Kindergarten Observation Form (KOF) to report their students’ proficiency on 20 readiness skills**

**Children are assessed in their primary languages in kindergarten**

**The KOF has demonstrated good reliability and validity**



**Figure 1: A List of Basic Building Blocks Readiness Skills**

<i>Basic Building Blocks</i>	<i>Individual Skills</i>
<i>Self-Care &amp; Motor Skills</i>	<ul style="list-style-type: none"> <li>▪ Use of small manipulatives such as crayons, paintbrush, buttons, zippers, etc.</li> <li>▪ Has general coordination on playground (kicking balls, running, climbing)</li> <li>▪ Performs basic self-help / self-care tasks (toileting, eating, washing hands)</li> </ul>
<i>Self-Regulation</i>	<ul style="list-style-type: none"> <li>▪ Works and plays cooperatively with peers (takes turns and shares)</li> <li>▪ Controls impulses and self-regulates (is not disruptive of others or class)</li> <li>▪ Stays focused / pays attention during activities</li> <li>▪ Follows one- to two-step directions</li> <li>▪ Participates successfully in circle time (listens, focuses, sits still, participates)</li> </ul>
<i>Social Expression</i>	<ul style="list-style-type: none"> <li>▪ Relates appropriately to adults other than parent / caregiver (converses with, seeks help from)</li> <li>▪ Appropriately expresses needs and wants verbally in primary language</li> <li>▪ Expresses curiosity and eagerness for learning (tries new activities, asks questions)</li> <li>▪ Has expressive abilities (tells about a story or experience in response to a prompt)</li> <li>▪ Engages in symbolic / imaginative play with self or peers (plays house, fireman)</li> </ul>
<i>Kindergarten Academics*</i>	<ul style="list-style-type: none"> <li>▪ Recognizes the letters of the alphabet (note: may be CAPs, lowercase or combination)</li> <li>▪ Writes own name (spelling and writing all letters correctly)</li> <li>▪ Engages with books (knows where a book starts, associates print with storyline, pretends to read)</li> <li>▪ Can count 10 objects correctly ('Please give Maria five crayons, please hand Celia 10')</li> <li>▪ Recognizes primary colors (Crayola basic 8)</li> <li>▪ Recognizes primary shapes (circle, triangle, square)</li> </ul>

Note: \* In 2003 and in subsequent assessments, the item "Can recognize rhyming words" was added to the Kindergarten Academics cluster. However, because this item was not included in 2001 and 2002, it is not included in the Kindergarten Academics scale for these analyses.

**The 20 readiness skills consistently sort into four Basic Building Blocks dimensions:**

- **Self-Care & Motor Skills**
  - **Self-Regulation**
  - **Social Expression**
- **Kindergarten Academics**

**These Basic Building Blocks sub-scales are reliable, with alpha coefficients ranging from .79 to .93**

## Identification of Four Readiness Portraits

In readiness assessments since 2004, ASR has used cluster analysis in order to identify clear-cut readiness profiles. Based on their pattern of readiness scores across the key readiness dimensions, children are sorted into one of four possible *Readiness Portraits*: *All-Stars*, *Needs-Prep* students, *Social-Stars*, and *Focused-on-the-Facts* students. Each portrait is characterized by a specific pattern of readiness, with *All-Stars* being near-proficient across the readiness skills, and *Needs-Prep* children being at the “not yet” and “just beginning” levels across all skills. *Social-Stars* do particularly well on social/emotional dimensions, while *Focused-on-the-Facts* children are proficient on *Kindergarten Academics* but have needs in *Self-Regulation* and *Social Expression* skills. (For a full discussion of the development of these portraits, please see the report entitled “Are Children Ready For School? Assessment of Kindergarten Readiness in San Mateo and Santa Clara Counties: Comprehensive Report 2005”, which can be downloaded at [www.appliedsurveyresearch.org](http://www.appliedsurveyresearch.org).)

## Methodology

### Memorandums of Understanding Signed With Seven of Eight School Districts

In fall 2006, Applied Survey Research sought to enter into memorandums of understanding (MOU) with the eight school districts that had participated in the 2001, 2002 and 2003 readiness assessments. The purpose of the project was explained, and districts were asked to provide standardized test scores – as well as other relevant information – about the students who had participated in those assessments. Because San Mateo County uses unique student identification numbers that are assigned in kindergarten to track students across schools and districts, ASR would in theory be able to provide a list of the unique identifiers of students who had participated, with the district sending back the requested information for each student.

Seven of the eight districts agreed to cooperate with the project, including Cabrillo Unified District, Jefferson School District, La Honda-Pescadero Unified District, Ravenswood City School District, Redwood City Elementary District, San Mateo-Foster City School District, and South San Francisco Unified District. The only district with which we were unable to proceed was Pacifica School District.

### Data Received From Five School Districts

Data were actually obtained over the ensuing year from five of the seven districts who had entered into the memorandum of understanding. ASR and the Partnership for School Readiness are grateful to the staff at the following districts for having provided the data critical to the analyses described in this report: Cabrillo Unified District, Jefferson School District, Ravenswood City School District, Redwood City Elementary District, and South San Francisco Unified District.

### **Kindergarten students fall into one of four Readiness Portraits:**

- **All-Stars are near-proficient across all skills**
- **Needs-Prep children are at the ‘not yet’ and ‘just beginning’ level across all skills**
- **Social-Stars have strengths in social-emotional skills, but they have needs in the area of Kindergarten Academics**
- **Focused-on-the-Facts children are proficient in their academics but have needs in Self-Regulation and Social Expression**



## How Did We Define “Academic Performance”?

To examine the connections between school readiness and students’ academic track records, ASR asked districts to provide students’ third, fourth, and fifth grade scores on two key California Standards Tests (CSTs) – English Language Arts and Mathematics. ASR used students’ scaled scores in all regression analyses; scaled scores could range from 150 to 600. Based on their scaled scores, students are also assigned one of five possible performance levels, including: advanced, proficient, basic, below basic, and far below basic. The general target, according to the California Department of Education, is for all California students to score at the proficient level or above. Detailed information about California’s Standardized Testing and Reporting (STAR) Program, of which the CSTs are a part, can be found at <http://www.cde.ca.gov/ta/tg/sr/>.

## Matching Readiness Data to Academic Track Records from the Districts

In some cases, the districts themselves matched students’ unique identifiers to standardized test scores. In most districts, however, ASR sifted through information on all students in the district in order to find the students who had participated in the readiness assessments. In this case, ASR matched using the unique student identification numbers, and then validated each match using initials and dates of birth. Of the 1,322 students who had participated in the 2001, 2002, and 2003 readiness assessments in the five districts, ASR was able to gather standardized test score information for over half of the children (54%,  $N = 719$ ). Figure 2 shows the number of children who participated in each readiness assessment, the number of students for whom we were able to match readiness and standardized test scores, and the percent matched in each assessment year.

**Kindergarten  
readiness scores  
were linked to  
California Standards  
Tests in English  
Language Arts and  
Mathematics**

**Test scores were  
matched for 54%  
of children who had  
participated in the  
2001, 2002, or  
2003 readiness  
assessments in the 5  
districts where data  
were obtained  
( $N = 719$ )**

**Figure 2: A Summary of the Number of Children with Matched Readiness and Standardized Test Scores Across Assessment Years and Districts**

Districts	Assessment Year								
	2001			2002			2003		
	# of K assessments	# of matches found	% matched	# of K assessments	# of matches found	% matched	# of K assessments	# of matches found	% matched
<i>Cabrillo Unified D.</i>	19	12	<b>63%</b>	36	26	<b>72%</b>	39	27	<b>69%</b>
<i>Ravenswood City School D.</i>	59	27	<b>46%</b>	138	60	<b>43%</b>	98	52	<b>53%</b>
<i>Redwood City Elementary D.</i>	103	27	<b>26%</b>	208	106	<b>51%</b>	185	104	<b>56%</b>
<i>Jefferson School D.</i>	68	41	<b>60%</b>	57	42	<b>74%</b>	70	41	<b>59%</b>
<i>South San Francisco Unified D.</i>	87	55	<b>63%</b>	81	50	<b>62%</b>	74	49	<b>66%</b>
<b>Subtotals &amp; Averages</b>	<b>336</b>	<b>162</b>	<b>52%</b>	<b>520</b>	<b>284</b>	<b>60%</b>	<b>466</b>	<b>273</b>	<b>61%</b>
<b>GRAND TOTALS</b>	<b>1,322 children were assessed at kindergarten in these 5 districts in 2001, 2002, and 2003</b> <b>For 719 (54%) of these children, ASR was able to match readiness information with standardized test scores</b>								

### A Profile of High-Need Districts

School districts were initially chosen to participate in the 2001, 2002 and 2003 readiness assessments because they were identified as having particular needs by the Peninsula Partnership for Children, Youth, and Families. Before examining links between the readiness of children in these districts and their later school success, it is helpful to examine how these districts compare to San Mateo County schools more broadly. So as to be most relevant to the analyses that follow, we focus just on those five school districts where we were able to match readiness to standardized test scores.

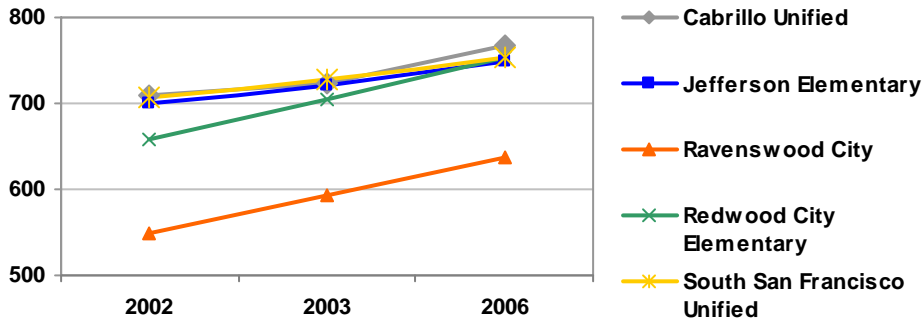
To clarify the student populations on which these analyses are based, ASR has provided a series of figures that show Academic Performance Index (API) scores, the percentages of English Learners, and the percentages of students participating in the Free and Reduced Lunch Program across the five districts relative to county averages. Data are displayed for each of the readiness assessment years (2001, 2002 and 2003, where possible), as well as the

**Analyses focus on 5 districts that were targeted for kindergarten readiness assessments because they were relatively high-need districts**

most recent data available.

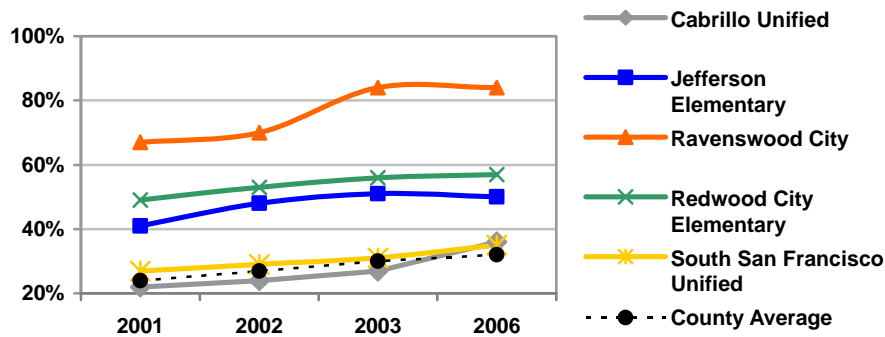
**API Scores, English Learner status, and Free and Reduced Meal Participation**

**Figure 3: API Scores Across Key Districts in 2002, 2003, and 2006**



Note: Data were obtained from the California Department of Education's Dataquest system: <http://dq.cde.ca.gov/dataquest/>. District averages were not readily available for 2001; county averages were not available for any of the years listed above.

**Figure 4: Percent of Children Enrolled in Free or Reduced Price Meals Across Key Districts in 2001, 2002, 2003 and 2006**

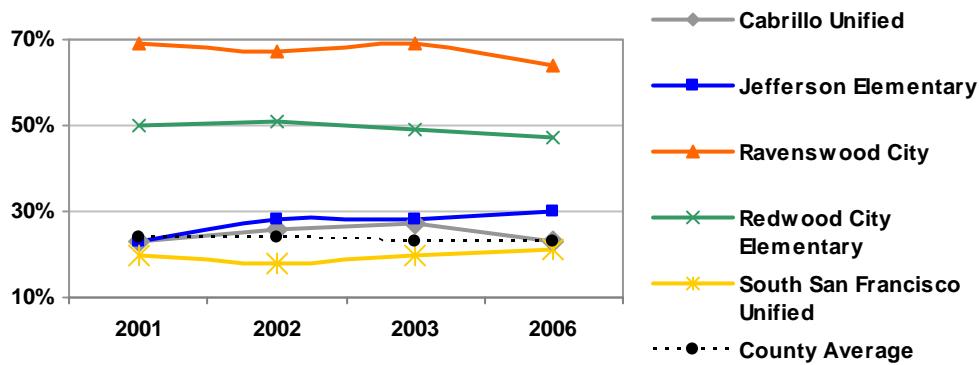


Note: Data were obtained from the California Department of Education's Dataquest system: <http://dq.cde.ca.gov/dataquest/>. Percentages reflect the following raw numbers for each district across the four years: Cabrillo Unified District: 840, 888, 965, 1,208; Jefferson School District: 3,199, 3,311, 3,413, 2,980; Ravenswood City School District: 3,479, 3,609, 4,233, 3,536; Redwood City Elementary District: 4,410, 4,705, 4,927, 4,967; South San Francisco Unified District: 2,631, 2,801, 2,942, 3,234; County averages: 21,810, 24,005, 26,075, 27,449.

**API scores are particularly low in Ravenswood City School District**

**Relatively high proportions of students are enrolled in free or reduced-price meals in Ravenswood City, Redwood City Elementary, and Jefferson Elementary Districts**

**Figure 5: Percent of English Learners Across Key Districts in 2001, 2002, 2003 and 2006**



**Ravenswood City School District and Redwood City Elementary District contain particularly high percentages of English Language Learners**

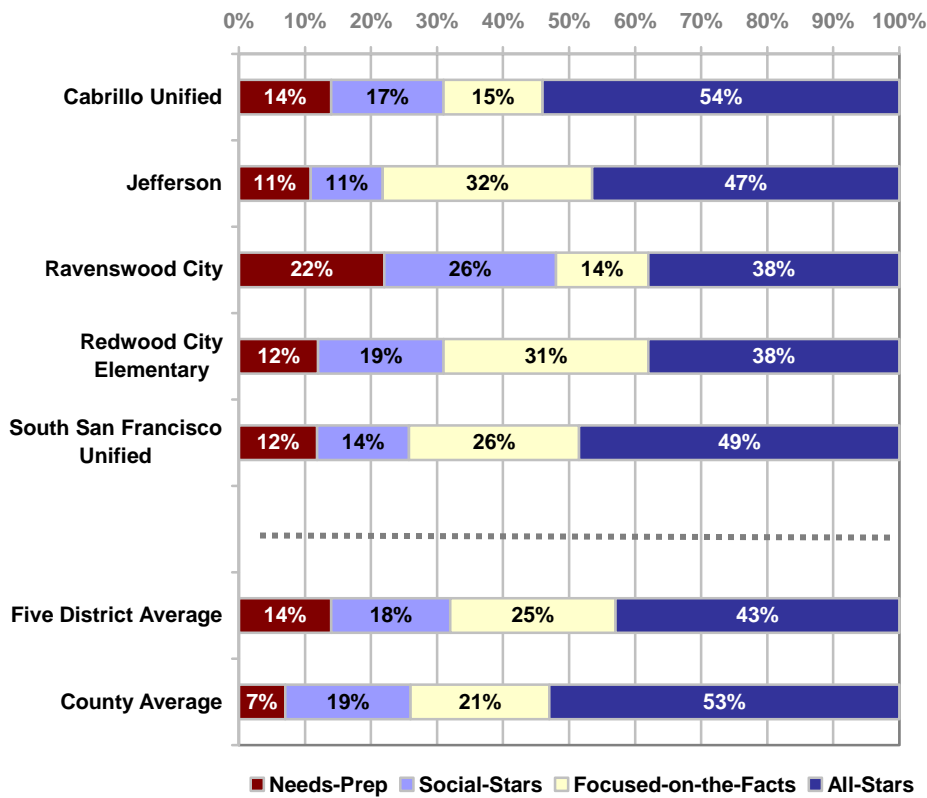
Note: Data were obtained from the California Department of Education's Dataquest system: <http://dq.cde.ca.gov/dataquest/>. Percentages reflect the following raw numbers for each district across the four years: Cabrillo Unified District: 853, 938, 979, 775; Jefferson School District: 1,621, 1,928, 1,861, 1,913; Ravenswood City School District: 3,593, 3,473, 3,477, 2,961; Redwood City Elementary District: 4,493, 4,461, 4,338, 4,038; South San Francisco Unified District: 1,892, 1,733, 1,898, 1,954; County averages: 21,059, 20,884, 20,664, 19,866.

### Prevalence of the Readiness Portraits

Another important way that the five key districts differ from San Mateo County more broadly is in the prevalence of *Readiness Portraits*. Figure 6 shows the prevalence of the *Readiness Portraits* in each of the five key districts, as well as overall across the districts. As a benchmark, we also provide the percentage of *Readiness Portraits* across San Mateo County more broadly, as gathered in the 2004 county-wide assessment. Examining differences across the five districts shows that:

- Ravenswood City has the highest proportion of *Needs-Prep* students; at 22 percent, the rate in this district is three times the county average;
- Ravenswood City also has a much higher percentage of *Social-Stars* (26%) than do the remaining districts;
- Jefferson, Redwood City Elementary, and South San Francisco Unified have higher percentages of *Focused-on-the-Facts* students, in comparison to other districts (32%, 31%, and 26%, respectively); and
- Cabrillo Unified has more *All-Stars* (54%) than other districts, especially in comparison to Redwood City Elementary (38%) and Ravenswood City (38%).

**Figure 6: Prevalence of Readiness Portraits Across Each District vs. County Averages**



**Cabrillo Unified, South San Francisco Unified, and Jefferson School Districts have higher proportions of All-Stars than remaining districts**

**There are 3 times as many Needs-Prep students entering school in Ravenswood City School District than county averages**

Note: Portrait membership was determined using the same algorithm as was used in the 2005 assessment when these *Readiness Portraits* were first identified for San Mateo County. Using the same algorithm to define the portraits allows us to validly compare the size of the portraits across the districts and county. Sample sizes from top to bottom are as follows: 65, 123, 137, 236, 148, 709, 669.

## Answers to Research Questions

In the sections that follow, readers will find answers to the following research questions:

- Overall, how did students perform on their standardized tests?
- What is the academic trajectory of each *Readiness Portrait*?
- Were children who were less ready for kindergarten able to close the gap?
- What readiness dimensions are linked to later school success?
- Which individual skills are most closely linked to later school success?
- What child characteristics and early experiences are associated with the readiness

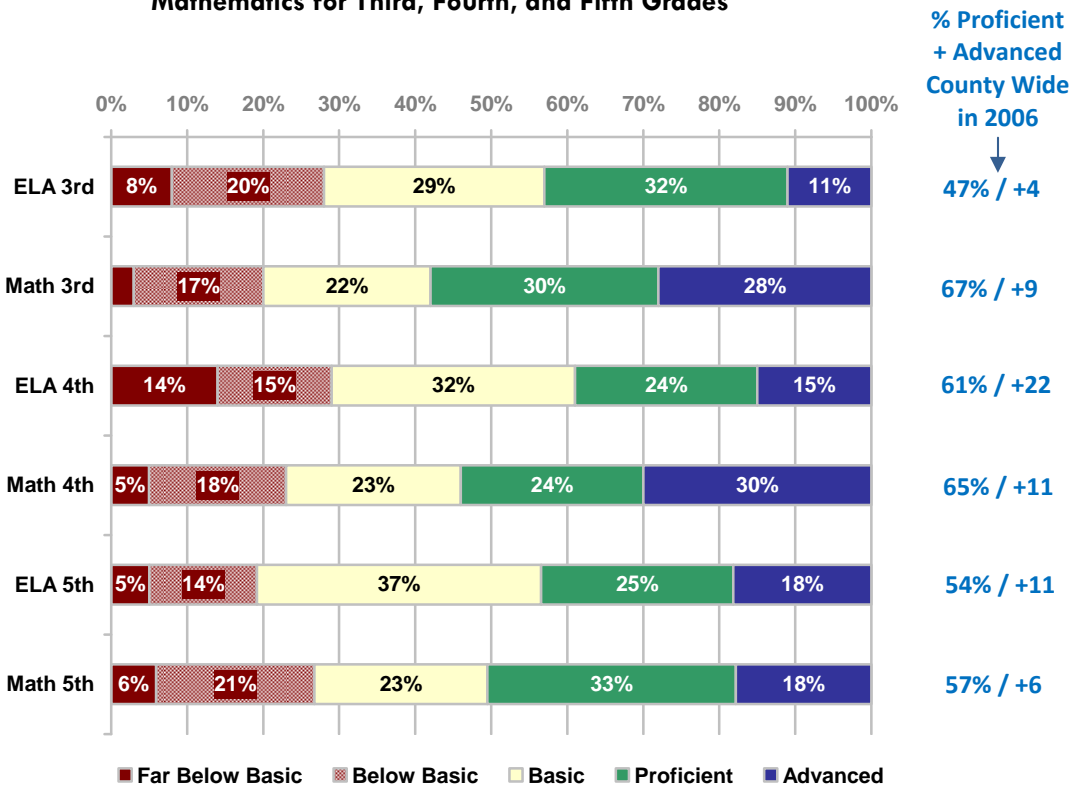
skills that appear important to later academic success?

### Overall, how did students perform on their standardized tests?

Before determining how readiness is related to academic success, we first examine the academic performance of students in our sample. Recall that students' scaled scores on the California Standardized Tests (CSTs) in English and math are used to assign performance levels, with proficient and advanced ratings being the goal. The figure below shows the percentage of students in the sample that scored at the advanced, proficient, basic, below basic, and far below basic levels in English and math for third, fourth, and fifth grades. Figures in the far right column represent the percentage of proficient + advanced students in 2006 for San Mateo County more broadly. Shown as well are the percentage point differences between the county scores and scores for the key districts.

In general, students were more likely to achieve proficient and advanced levels in mathematics than in English across the three grades. At third grade, 43 percent of students meet proficient / advanced criteria, as compared to 47 percent across San Mateo County. At third grade, more than half of students are at least proficient in mathematics (58%). Achievement is fairly similar in fourth and fifth grades.

**Figure 7: Performance Levels in Key Districts for English Language Arts (ELA) and Mathematics for Third, Fourth, and Fifth Grades**



Note: Sample sizes are as follows: ELA 3rd grade: 718; Math 3rd grade: 717; ELA 4th grade: 517; Math 4th grade: 516; ELA 5th grade: 243; Math 5th grade: 244. Findings 3% or less are not labeled.

**At 3<sup>rd</sup> grade, 43% of students in the data set met state targets, reaching the Proficient or Advanced level in English Language Arts**

**58% reached the Proficient or Advanced level in 3<sup>rd</sup> grade math**

**Students tend to score higher on math tests than on English Language Arts tests**

**Students in the 5 districts do not perform as well as recent county averages**

## What is the academic trajectory of each *Readiness Portrait*?

The four *Readiness Portraits* have been a valuable tool to educate the community about different patterns of readiness that children exhibit as they enter kindergarten. Scores of kindergarten teachers have supported the validity of these portraits, agreeing that children do tend to enter school exhibiting the patterns of readiness inherent in the *All-Star*, *Social-Star*, *Focused-on-the-Facts*, and *Needs-Prep* profiles. Although the portraits do seem helpful as we describe children's readiness for kindergarten, we did not know whether they would be useful as we examine children's academic track records through elementary school. Therefore, a main goal of this research was to determine whether the *Readiness Portraits* contribute to our understanding of who is apt to score well on standardized tests and who does not.

The two figures that follow show the academic trajectories of each *Readiness Portrait*. Figure 8 shows standardized test scores for English from third, fourth, and fifth grades, whereas Figure 9 shows standardized test scores for math from third, fourth, and fifth grades.

At third and fourth grades, *All-Stars* remain significantly ahead of all other portraits in both English and math. In contrast, *Needs-Prep* students score significantly below all other portraits on both math and English. *Focused-on-the-Facts* students are significantly below their *All-Star* peers, but significantly higher than *Social-Stars* in both English and math. *Social-Stars* do significantly better than do *Needs-Prep* students, but they remain significantly behind *Focused-on-the-Facts* and *All-Star* students.

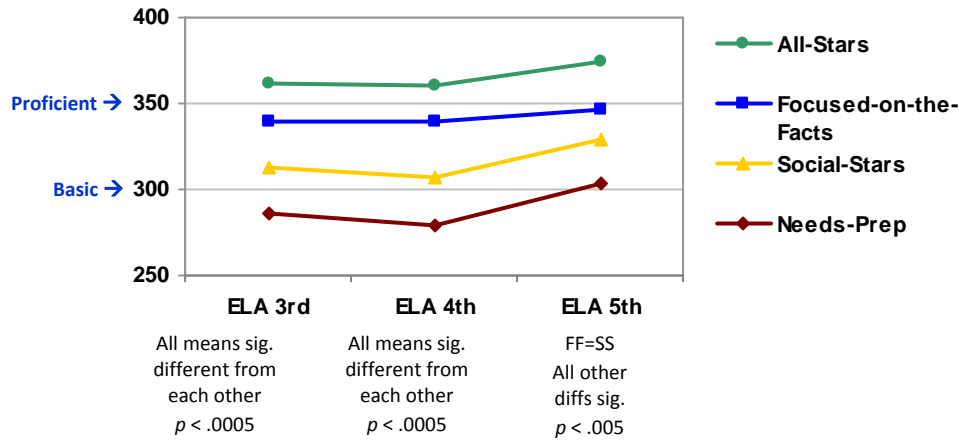
By fifth grade, gaps remain for both English and math. *All-Stars* remain significantly ahead of their peers in English, but *Social-Stars* have caught up to the *Focused-on-the-Facts* children. *Needs-Prep* children are still significantly behind the other groups in English, although they have made up some ground. Please note, however, that this fifth-grade score is based on only 28 children, and so it may not represent the performance of *Needs-Prep* children more broadly.

In math, *Focused-on-the-Facts* children have caught up (statistically speaking) with their *All-Star* peers. These two groups are significantly above *Social-Stars* and *Needs-Prep* children. There is a slight reduction of the performance gap in math at fifth grade, but the closure has more to do with a decrease seen in *All-Star* scores than a noticeable advancement in scores on the part of the other *Readiness Portraits*. (Again please note that the fifth-grade sample size for *Needs-Prep* students is small.)

***All-Stars start ahead and stay ahead – these students score significantly above their peers in kindergarten ... and achieve at higher levels in both English and math in later elementary grades***

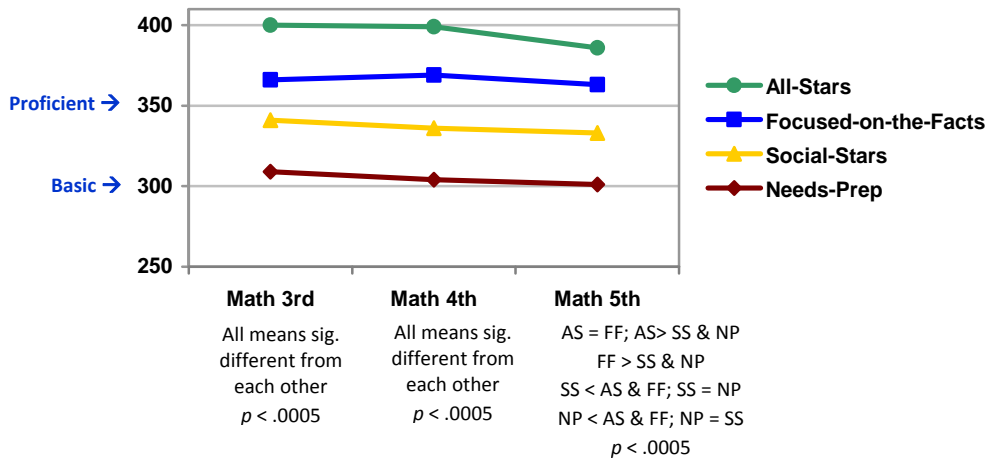
***Needs-Prep students start behind and remain behind through 5<sup>th</sup> grade***

**Figure 8: English Standardized Test Scores Over Time, By Readiness Portrait**



Note: Sample sizes for each portrait for each year are as follows: *All-Stars*: 307, 202, 86; *Focused-on-the-Facts*: 180, 134, 71; *Social-Stars*: 125, 102, 53; *Needs-Prep*: 96, 69, 28. Please note the low sample size for fifth-grade ELA scores for *Needs-Prep* students. Analyses of variance were conducted to explore significant differences among portraits at each year; these findings are noted for each year immediately below the test labels.

**Figure 9: Math Standardized Test Scores Over Time, By Readiness Portrait**



Note: Sample sizes for each portrait for each year are as follows: *All-Stars*: 307, 202, 86; *Focused-on-the-Facts*: 179, 134, 71; *Social-Stars*: 125, 102, 53; *Needs-Prep*: 96, 69, 29. Please note the low sample size for fifth-grade math scores for *Needs-Prep* students. Analyses of variance were conducted to explore significant differences among portraits at each year; these findings are noted for each year immediately below the test labels.

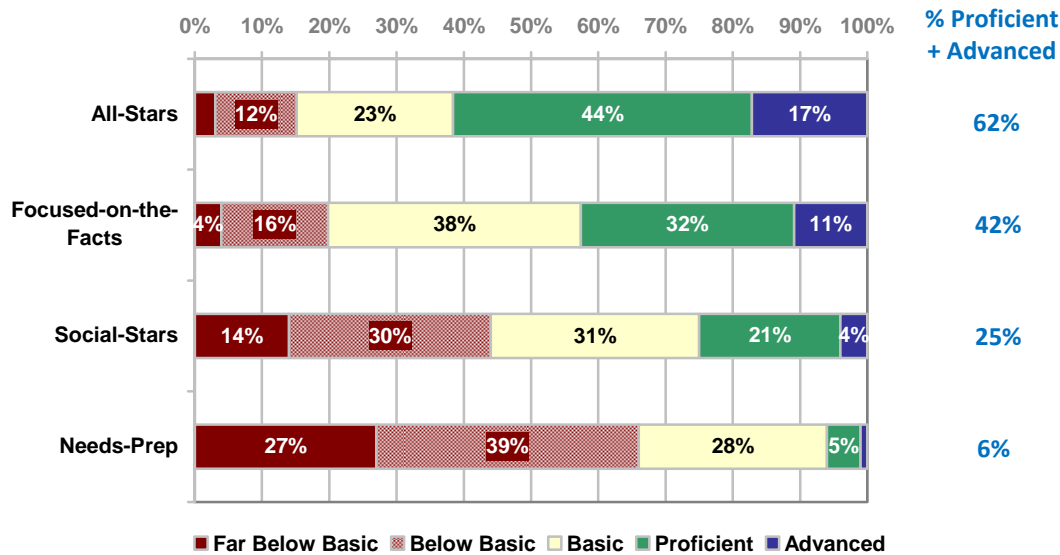
Clearly, it's best to be an *All-Star*; as Figures 8 and 9 show, *All-Stars* achieve at significantly higher levels on English and math standardized tests than all other *Readiness Portraits* ... at least through fourth grade. To accompany the analyses reported above, we also examined what proportion of each *Readiness Portrait* met the state's performance level targets of reaching at least the Proficient level. Figure 10 shows the percentage of each *Readiness Portrait* at each performance level – the column of blue numbers shows the percent of



students reaching the targeted Proficient + Advanced levels of performance.

Sixty-two percent of *All-Stars* have reached at least the Proficient level of performance in English at third grade. *All-Stars* are 20 points ahead of *Focused-on-the-Facts* children, of whom 42 percent meet the target. *Social-Stars* and *Needs-Prep* children are far behind; just one in four *Social-Stars* attains the Proficient or Advanced levels of performance, and fewer than one in ten *Needs-Prep* children do.

**Figure 10: Percent of Each Readiness Portrait at Each Performance Level on Third-Grade English Tests**



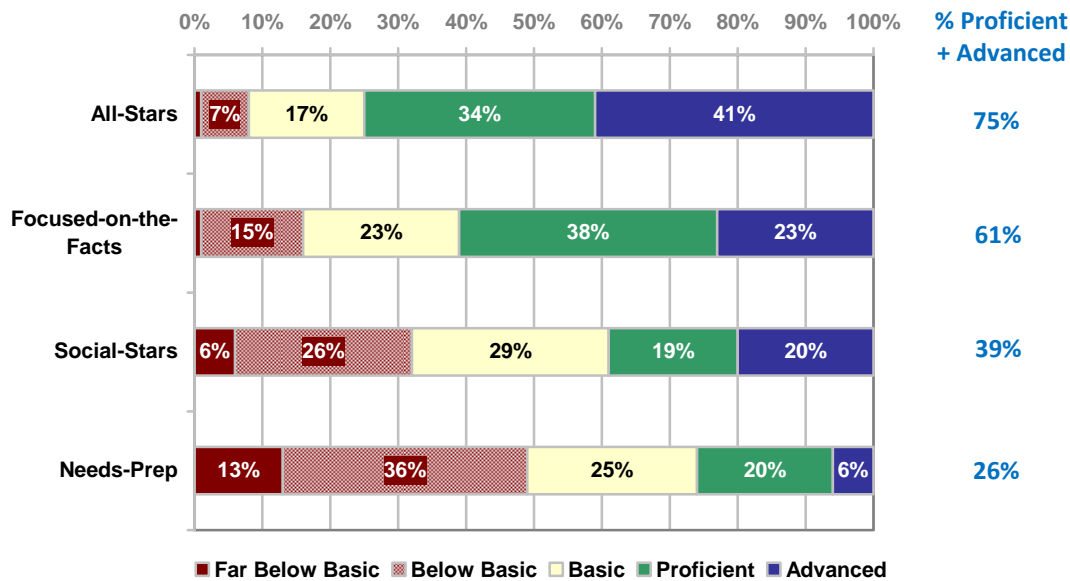
Note: This figure is based on 307 *All-Stars*, 180 *Focused-on-the-Facts* children, 125 *Social-Stars*, and 96 *Needs-Prep* students. Findings less than 2% are not labeled. Proficient + Advanced levels may not sum to the percentages shown due to rounding. Findings 3% or less are not labeled.

Relatively more children achieve the Proficient + Advanced level in mathematics than in English at third grade. *All-Stars* are still in the lead, with about three in four children meeting the target. *Focused-on-the-Facts* children are not too far behind, with 61 percent meeting criteria for the Proficient + Advanced level. However, just 39 percent of *Social-Stars*, and 26 percent of *Needs-Prep* students, attain this same level of achievement in math.

**All-Stars are most likely to reach the Proficient or Advanced levels in English at 3<sup>rd</sup> grade, although not all of them reach state-targets**

**Just 6% of Needs-Prep children met the targeted Proficient or Advanced levels in English; just one in four Social-Stars are at least proficient**

**Figure 11: Percent of Each Readiness Portrait at Each Performance Level on Third-Grade Math Tests**



Note: This figure is based on 307 All-Stars, 180 Focused-on-the-Facts children, 125 Social-Stars, and 96 Needs-Prep students. Findings less than 3% are not labeled.

**Performance in math is better; 3/4 of All-Stars achieve the Proficient or Advanced levels; most Focused-on-the-Facts children do, as well**

**At kindergarten, there are large gaps in readiness – All-Stars, children with preschool experience, and English-proficient children are much more ready than their counterparts**

**Do these gaps close in later grades? Not in most cases**

### Were children who were less ready for kindergarten able to close the gap?

Readiness assessments in Santa Clara and San Mateo counties typically show that some types of children are more ready for kindergarten than are others. For example, *All-Stars* are much more ready for kindergarten than are *Needs-Prep* children. Children with preschool experience tend to be more proficient in readiness than are their peers who have not had a preschool experience. Children who are proficient in English tend to be readier for kindergarten than are children who are English Learners. We also find patterns for ethnicity, with children from Latino families typically scoring below children of other ethnic backgrounds.<sup>3</sup>

In the context of this report on the long-term implications of readiness, we were most interested to see whether initial gaps in readiness persisted at third grade – whether children who entered school less ready than their peers were able to make up any of the ground by the time third grade standardized tests were administered. Below we examine the relative gaps in readiness, English test scores, and math test scores for four different groupings of children: *Readiness Portraits*, children with and without preschool experience, children who are English-proficient vs. English Learners, and children of Latino, Caucasian, Asian, and Pacific Islander descent.

To truly assess the relative sizes of gaps at kindergarten and at third grade, we needed to convert readiness scores and the third-grade test scores to standardized z-scores. Standardizing each set of scores ensures that when we graph both readiness and test scores,

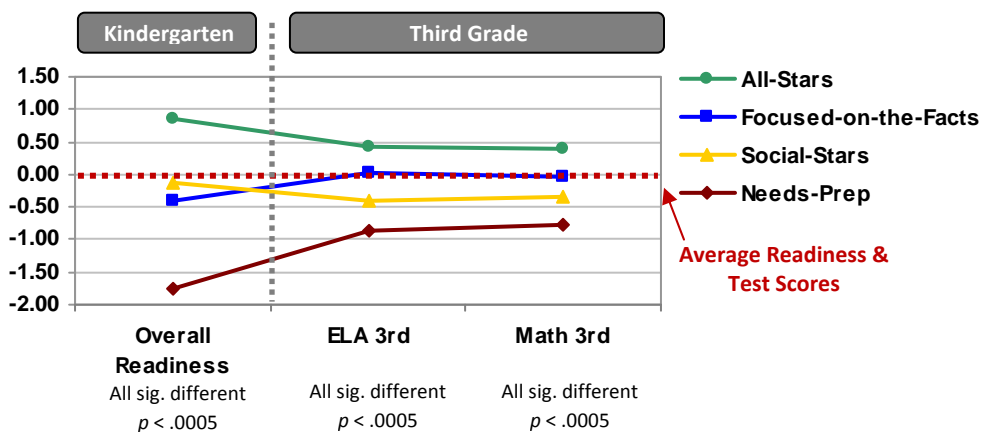
all data are on comparable scales. Comparability is important, of course, because it allows us to examine the size of the gaps despite the different scales initially used to assess readiness and academic performance. In transforming each set of scores, the average becomes 0; positive scores represent scores that are above the average, whereas negative scores represent scores that are below the average.

### An examination of the Readiness Portraits

*Needs-Prep* children are far behind their peers on almost all of the readiness skills we include in the *Kindergarten Observation Form*. Once these children are in the elementary school setting, are they able to make up any of these gaps by third grade? In other words, are *Needs-Prep* students less behind on third-grade test scores than they were on kindergarten readiness skills?

Figure 12 shows that gaps have narrowed. Gaps are widest at kindergarten – indeed, the portraits were created so as to be as different as possible on readiness. Gaps do still persist at third grade, according to standardized English and math scores. *Needs-Prep* students still score significantly below their peers, with *All-Stars* at the top. But the closure of this gap is due as much to significant improvement among *Needs-Prep* students (as measured by paired *t*-tests,  $p < .0005$ ) as it is due to a significant decline in the performance of *All-Star* students ( $p < .0005$ ). Whereas *Focused-on-the-Facts* students logged improvement vis-à-vis their readiness scores ( $p < .0005$ ), *Social-Stars* decreased on English and math, delivering them farther from average than where they were in kindergarten ( $p < .05$ ).

**Figure 12: Size of the Readiness and Test Score Gaps at Kindergarten and Third Grade, By Readiness Portrait**



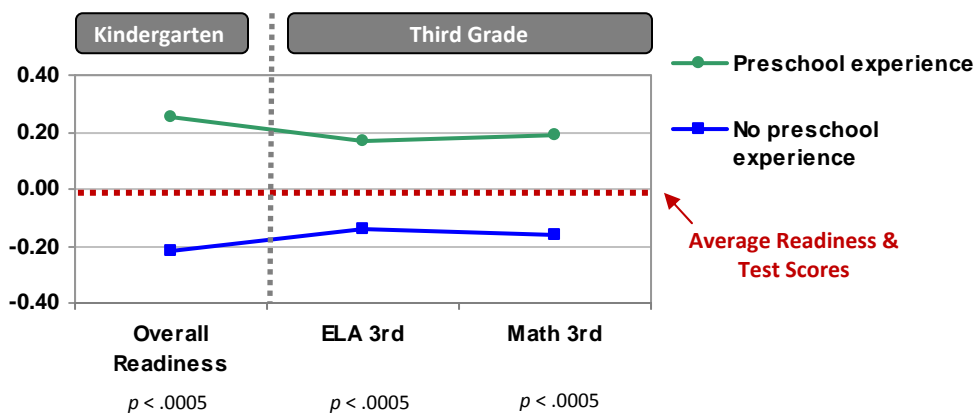
Note: Sample sizes for overall readiness, English scores, and math scores for each *Readiness Portrait* are as follows: *All-Stars*: 307, 307, 307; *Focused-on-the-Facts*: 180, 180, 179; *Social-Stars*: 125, 125, 125; *Needs-Prep*: .97, 96, 96. Differences in overall readiness, English scores, and math scores across the portraits were assessed via one-way analyses of variance. For overall readiness, English scores, and math scores, each *Readiness Portrait* is significantly different from each other *Readiness Portrait*. Changes from kindergarten readiness to English and math scores for each portrait were assessed via paired *t*-tests. *Needs-Prep* and *Focused-on-the-Facts* students showed significant increases, whereas *All-Stars* and *Social-Stars* posted significant decreases.

**Gaps are narrowing for the Readiness Portraits, but the shrinkage is due as much to decreases among All-Stars as increases among Needs-Prep students**

### An examination of preschool experience

Typically, children who have had a preschool experience prior to kindergarten are more proficient across many readiness skills than are children who have not had a preschool experience. In our sample, less than half of the children attended a preschool (46%, according to their teachers). Figure 13 shows that children with preschool experience did score significantly higher on overall readiness than did children who did not had a preschool experience. Unfortunately, this gap is still sizable at third grade; children with preschool experience still outscore their non-preschooled peers in both English and math. Although the gap has narrowed a bit, with both preschooled and non-preschooled children scoring closer to the mean on academic tests than they did for overall readiness, the changes for each group were not statistically significant (according to paired *t*-tests).

**Figure 13: Size of the Readiness and Test Score Gaps at Kindergarten and Third Grade, By Preschool Experience**



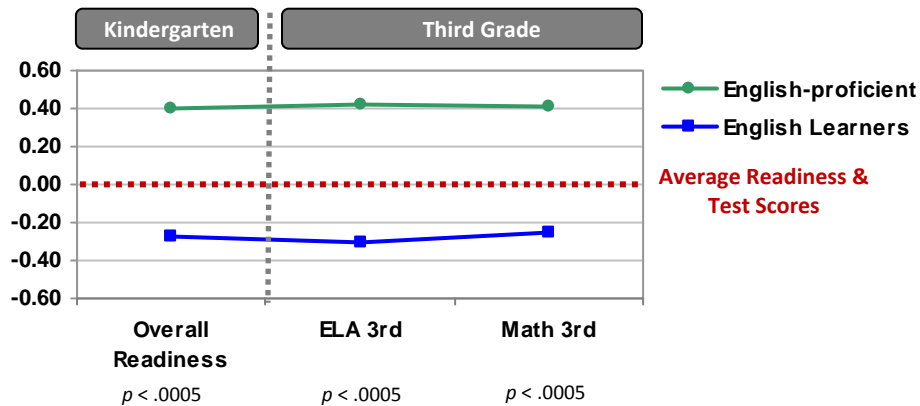
Note: This chart is based on 329-330 children with preschool experience and 382-384 children with no preschool experience. The difference between children with and without preschool experience is significant for overall readiness, ELA, and math scores. Significance was assessed via *t*-tests,  $p < .0005$ . The significance of the change between overall readiness and English scores – and overall readiness and math scores – for each group of children was assessed via paired *t*-tests and found to be non-significant.

### An examination of English Learners

Next we examine differences between children who enter kindergarten already proficient in English and those who are in the process of learning English. A full 61 percent of the children in our sample were identified as English Learners at kindergarten (much higher than the county average of 37% for new kindergarten students in 2001, for example). As Figure 14 shows, there are quite sizable gaps in readiness between these two groups at kindergarten, with children who are proficient in English far outscoring their English Learner peers on overall readiness. This gap in performance is alive and well four years later, showing no indication of narrowing; English-proficient children still outscore their English Learner peers on both English and math tests by a wide margin. These results are consistent with research using the federal government's Early Childhood Longitudinal Study, Kindergarten Cohort 1998-1999 (ECLS-K), commissioned by the Foundation for Child Development (2007).

**Preschool gaps remain – children who attended preschool still outscore their non-preschooled peers at 3<sup>rd</sup> grade**

**Figure 14: Size of the Readiness and Test Score Gaps at Kindergarten and Third Grade, By English Learner Status**



Note: This chart is based on 243 English-proficient children and 374-375 English Learners. The difference between these groups of children is significant for overall readiness, ELA, and math scores. Significance was assessed via t-tests,  $p < .0005$ . The significance of the change between overall readiness and English scores – and overall readiness and math scores – for each group of children was assessed via paired t-tests and found to be non-significant.

We should note that there are many English Learners who enter school ready to learn; 28 percent of English Learners were classified as *All-Stars*. Although *All-Star* English Learners do significantly better in English and math at third grade than do English Learners of other readiness profiles, they still trail significantly behind their English-proficient peers.

### An examination of ethnicity

San Mateo County kindergarten students are a diverse group; among the students in our sample, the majority are of Latino descent (52%), 20 percent are Caucasian, 9 percent are Asian, 6 percent are Pacific Islander, 5 percent are African American, and 8 percent are designated as multi-ethnic or “other.” Of these groups, sample size was plentiful enough to examine readiness and test scores for Latino, Caucasian, Asian, and Pacific Islander students.

Figure 15 shows gaps in readiness and academic performance across these four largest ethnic groups in the five San Mateo County districts that participated in this longitudinal study. Students who are Caucasian and Asian entered school at higher levels of readiness than did students who are Pacific Islanders or Latino. In some respects, gaps are even more pronounced four years later, with Caucasian and Asian students doing far better on English and math than their peers.

Paired *t*-tests allowed us to gauge whether each ethnic group made significant progress on closing gaps by third grade. These tests revealed an interesting story:

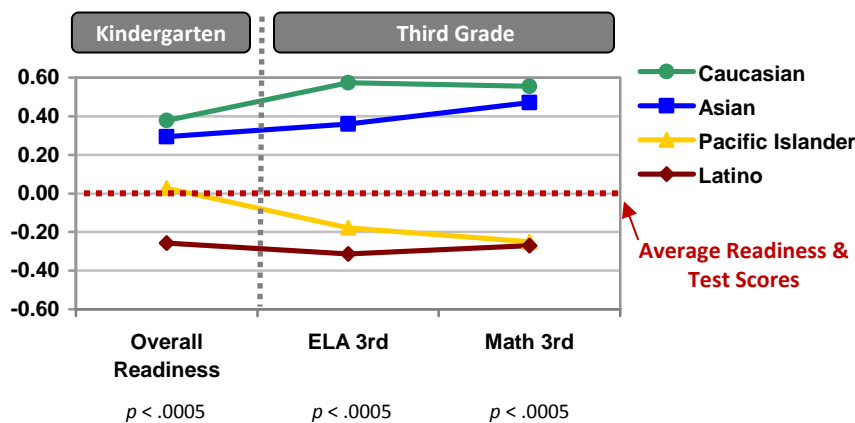
- Caucasian students have made significant progress in lifting their academic scores in both English ( $p < .05$ ) and math (marginally,  $p = .07$ ) by third grade, vis-à-vis their kindergarten readiness scores. Due to their success, the ethnicity gap is actually widening.

**The large gaps in kindergarten readiness between English Learners and children who are English-proficient show no sign of closing when it comes to test scores at 3<sup>rd</sup> grade**

**Students who are Caucasian and Asian do better than do students who are Latino and from the Pacific Islands – this achievement gap is actually widening**

- Asian students have made some progress in the area of math, (marginally,  $p < .10$ ).
- Pacific Islander students are actually losing ground, especially when it comes to their third grade math scores ( $p < .05$ ). Although they entered with fairly average readiness scores, their academic performance has sagged below the mean by third grade.
- The scores of Latino students are staying stable vis-à-vis their kindergarten readiness levels (paired  $t$ -tests were not significant). These students are not making up any ground in comparison to other students. Although they are staying stable, the significant increases for Caucasian and Asian students mean that, in effect, the performance gap is widening for these students.

**Figure 15: Size of the Readiness and Test Score Gaps at Kindergarten and Third Grade, By Ethnicity**



Note: This chart is based on 362-363 Latino, 61 Asian, 142-143 Caucasian, and 44 Pacific Islander children. For overall readiness, the differences are as follows: C=A, C > PI & L, A = PI, A > L, PI < C, L = PI, L < A & C. For ELA scores, the differences are as follows: C > L & PI, C = A, A > L & PI, A = C, PI < A & C, PI = L, L < A & C, L = PI. For math scores, the differences are as follows: C > PI & L, C = A, A = C, A > PI & L, PI = L, PI < A & C, L = PI, L < A & C. Significance was assessed via analyses of variance,  $p < .0005$ . The significance of the change between overall readiness and English scores – and overall readiness and math scores – for each group of children was assessed via paired  $t$ -tests.

### What readiness dimensions are linked to later school success?

If readiness skills are important only for kindergarten transition – and if they do not play a role in later academic achievement – readiness scores should NOT be correlated with students’ standardized test scores. The regression analysis described below reveals that this is not the case, however. Rather, readiness scores do help us understand variations in students’ academic achievement at third grade. The bottom line? Students’ *Basic Building Blocks* scores are strongly related to their third-grade standardized English and math scores.

#### Background information about regression analysis

To better understand how student characteristics and the *Basic Building Blocks* of readiness are associated with academic performance, we conducted a set of regression analyses. Because regression analysis allows us to examine all of the measured factors at the same time, we can draw conclusions about which factors are independently

**Regression analysis can show which Basic Building Blocks – and which specific readiness skills – predict later achievement in English Language Arts and math**

associated with academic performance — above and beyond their associations with other factors. Multivariate analyses like regression can provide a glimmer of why children vary, but these are correlational — not causal — analyses. In other words, it is not possible to state from such data that higher *Kindergarten Academics* scores cause improved academic performance, for example. Correlational analyses are helpful, however, in pointing out factors that are both related to academic preparedness and factors that the community can perhaps impact. To answer questions about whether each of the following factors in our model actually causes increases in academic performance, one would need to conduct a study with an experimental research design. It is also important to note that there are many other variables that could affect academic achievement that are beyond the scope of this research. Variables like temperament, parenting practices, physical health, sheer intelligence, school and teacher quality, for example, are not measured in this study.

Figure 16 presents the results of the regression analysis. Please keep in mind the following information when interpreting that figure. Each bar in Figure 16 represents the size of a beta coefficient.

- Beta coefficients are a measure of the strength of association between each factor and standardized test scores, over and above all of the other variables in the model.
- The magnitude of each beta coefficient signals whether the factor in question is strongly or weakly associated with school readiness. All of the factors depicted in Figure 16 are either statistically significant and, therefore, associations with readiness are statistically strong.
- All coefficients can be compared to one another to determine their relative strengths. A coefficient of .40, for example, is twice as strong as is a coefficient of .20.
- Variables with positive coefficients are positively related to academic performance. For example, higher *Kindergarten Academics* scores are associated with higher test scores.

### Contents of the model

To help explain students' performance at third grade, we used the following variables to predict third grade English and math scores:

- Gender, English learner status, special needs status
- *Self-Care & Motor Skills, Self-Regulation, Social Expression* and *Kindergarten Academics* scores
- All possible two-way combinations of the *Basic Building Blocks*. (These interaction terms were included in the model to see whether a combination of readiness proficiency was necessary for academic success. If children need both social-emotional strengths as well as academic basics, for example, the interaction term

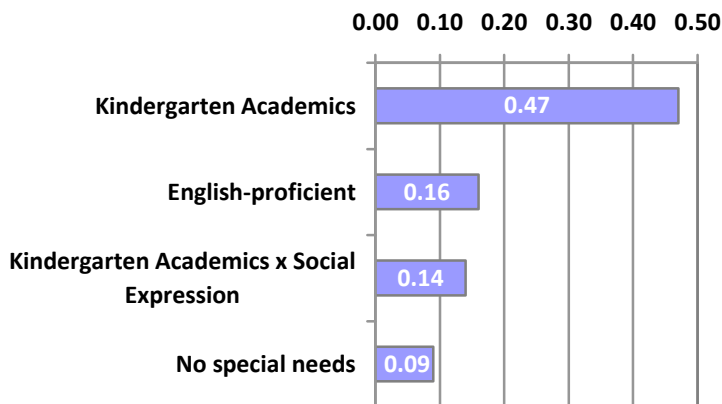


between *Self-Regulation* and *Kindergarten Academics* would be significant.)

The variables listed above explained a significant amount of the variation in third-grade English scores ( $R^2 = .31, p < .0005$ ). Figure 16 shows that:

- Of the four *Basic Building Blocks*, *Kindergarten Academics* is most closely associated with English test scores. Children who enter kindergarten proficient in the academic basics of kindergarten – recognition of colors and shapes, letter-recognition, ability to count 10 objects, writing one’s own name, and engaging with books – also tend to do better on their English standardized tests.
- The model also shows an association for the interaction between *Kindergarten Academics* and *Social Expression*. This finding is discussed in greater depth below.
- Children who are proficient in English and who have no special needs tend to do better in English in third grade.

**Figure 16: Results of Regression Analysis Using Basic Building Blocks Scores to Predict Third-Grade Standardized Test Scores in English Language Arts**



Note: The numbers in the figure above represent standardized beta-weights. This regression model was significant, with an adjusted  $R^2$  of .31,  $p < .0005$ . This model is based on 607 students, as there was some missing data for English Learner status. In addition to the effects noted above, we found a marginally significant effect for *Self-Care & Motor Skills*. However, we found an inverse relationship; that is, children with relatively lower scores on the *Self-Care & Motor Skills* dimension tended to have higher scores on English standardized tests.

From follow-up analysis, it appears that proficiency in *Social Expression* – relating appropriately to adults, appropriately expressing needs and wants, expressing curiosity for learning, engaging in symbolic play, and having expressive abilities – does not play a role if children are low in *Kindergarten Academics*. However, children who are proficient in *Kindergarten Academics* get an extra boost if they are also proficient in *Social Expression*. The figure below depicts the English scores for children who are high and low on both readiness dimensions.

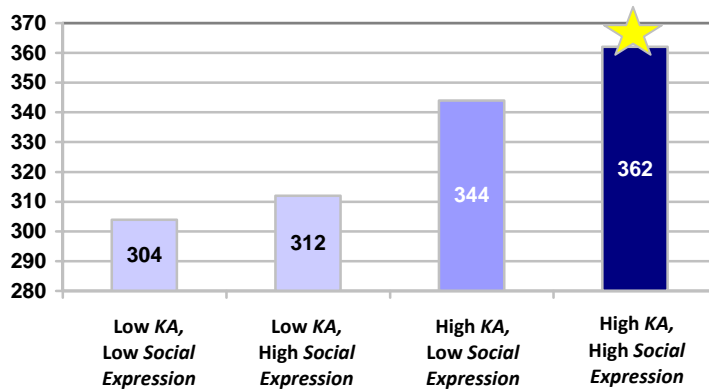
**Proficiency on Kindergarten Academics skills is the strongest predictor of later test scores in English Language Arts**

**Children high on Kindergarten Academics who are also high on Social-Expression demonstrate the biggest boost in achievement**

**Children who are proficient in English and have no special needs are also likely to score higher**



**Figure 17: Third-Grade English Scores for Children High and Low in *Kindergarten Academics* and *Social Expression***



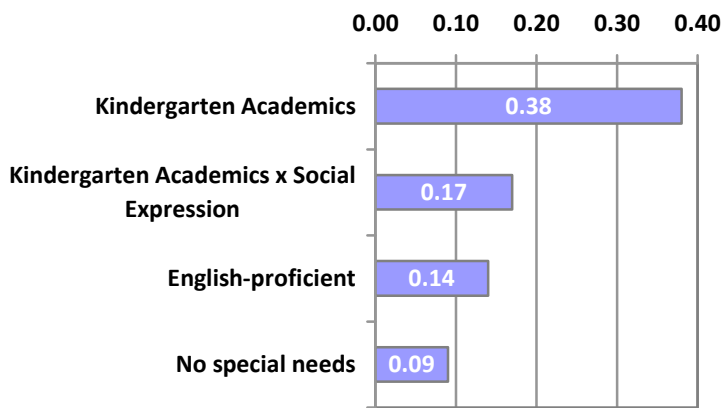
Note: Means are based on the following sample sizes for each group: Low KA / Low SE = 215; Low KA / High SE = 70; High KA / Low SE = 117; High KA / High SE = 309. The star signifies that the difference in scores is statistically significant,  $p < .0005$ .

We find much the same pattern of results for third-grade mathematics scores. Figure 18 shows the results of a parallel regression analysis on math scores using the same set of variables. Again we see that:

- Of the four *Basic Building Blocks*, *Kindergarten Academics* is most closely associated with math test scores. Children who enter kindergarten proficient in the academic basics of kindergarten also tend to do better on their math standardized tests.
- The model also shows an association for the interaction between *Kindergarten Academics* and *Social Expression*. This finding is discussed in greater depth below.
- Children who are proficient in English and who have no special needs tend to do better in math in third grade.

**Findings for math scores are very similar...**

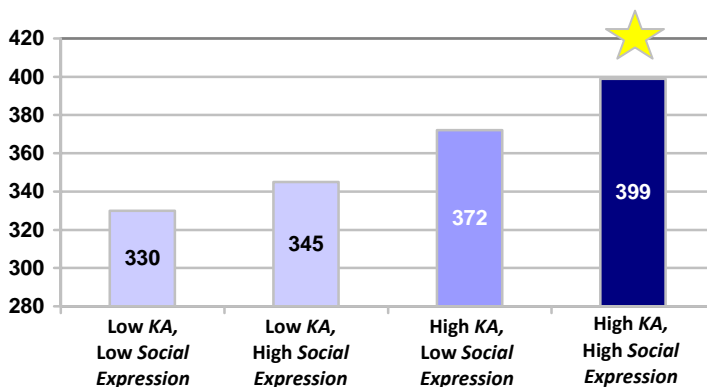
**Figure 18: Results of Regression Analyses Using Basic Building Blocks Scores to Predict Third-Grade Standardized Test Scores in Math**



Note: The numbers in the figure above represent standardized beta-weights. This regression model was significant, with an adjusted  $R^2$  of .24,  $p < .0005$ . This model is based on 607 students, as there was some missing data for English Learner status.

From follow-up analysis, it again appears that proficiency in *Social Expression* gives children an extra boost if they are also proficient in *Kindergarten Academics* (see Figure 19). Math scores are highest for those children who are high in *Kindergarten Academics*, but also high in *Social Expression*.

**Figure 19: Third-Grade Math Scores for Children High and Low in Kindergarten Academics and Social Expression**



Note: Means are based on the following sample sizes for each group: Low KA / Low SE = 214; Low KA / High SE = 70; High KA / Low SE = 117; High KA / High SE = 309. The star signifies that the difference in scores is statistically significant,  $p < .0005$ .

### Associations between readiness and fourth- and fifth-grade scores

Because we also gained access to students' test scores in fourth and fifth grades, we also examined how readiness was related to achievement in later elementary grades.

- At fourth grade, the power of readiness to explain academic test scores (after accounting for third grade test scores) does decay, but *Kindergarten Academics* still

**Again, Kindergarten Academics shows the strongest connection to math achievement, although children with proficiencies in both academics and Social Expression tend to do best**

**Children who are English-proficient and who have no special needs again outscore their counterparts on math tests**

yields a significant association with both English and math scores.

- This effect fades by fifth grade, however, and readiness is not related to fifth grade scores (after accounting for fourth grade scores).

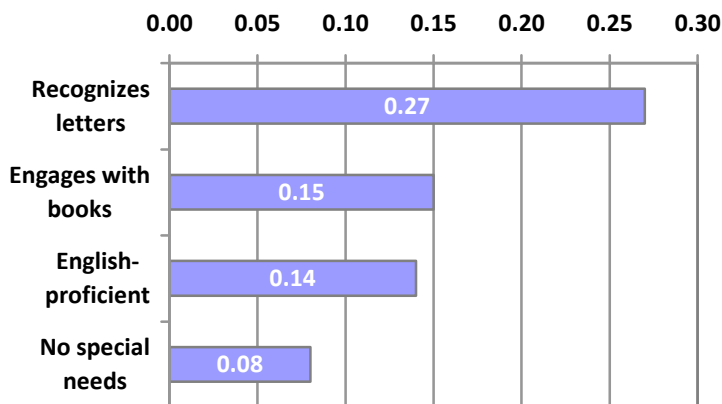
### Which individual skills are most closely linked to later school success?

The above analyses help us understand the power of the *Basic Building Blocks* to help us understand subsequent performance on standardized tests. However, we were also interested in whether any individual skills would emerge as significantly related to academic success, even though the broader *Basic Building Block* with which it is associated may not be. Previous research has found an association between academic achievement and the ability to focus attention, for example (e.g., Alexander et al, 2003; Duncan et al, 2007). This skill is nested within the *Self-Regulation* skill cluster, along with items like controlling impulses and working well with others. To see whether individual readiness skills would emerge as important, we entered all measured readiness skills into regression models to understand third-grade English and math scores. The graphs below show the relative strengths of associations between each skill and standardized test scores.

#### Associations between individual skills and English scores

Only two individual skills posted a significant relation with third-grade English scores – letter recognition and engages with books. Children who are able to recognize more letters as they enter kindergarten and who are versed with books – both skills in the *Kindergarten Academics* cluster – tend to have higher English scores at third-grade. Again we see the impact of English-proficiency and having no special needs.

**Figure 20: Regression Coefficients for Readiness Skills and Third-Grade English Scores**



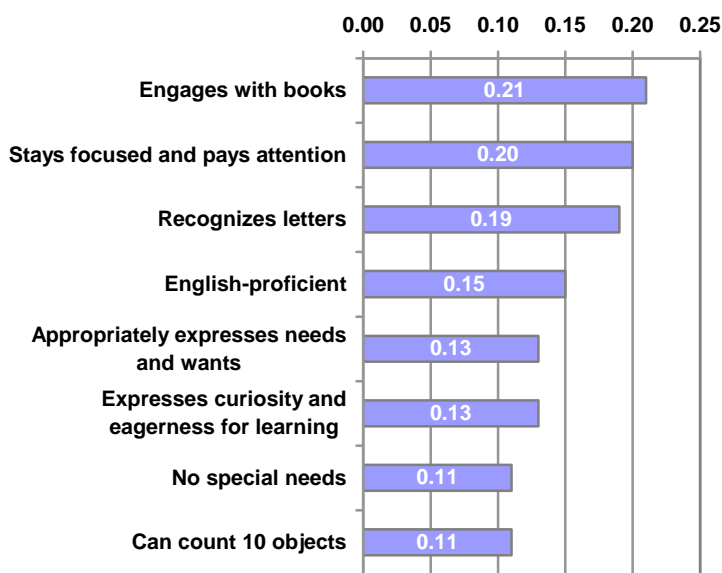
Note: The following variables were entered into the model: gender, English learner status, special needs status, all readiness skills. These variables explain a significant portion of variance in English scores,  $R^2=.31$ ,  $p < .0005$ . The regression is based on 478 children due to missing data on individual readiness skills.

***In terms of individual readiness skills, letter recognition and engagement with books appear most important to later achievement in English Language Arts***

### Associations between individual skills and math scores

In comparison to the connections between individual skills and English performance, there are many more associations between specific readiness skills and third-grade math scores. Most of the skills belong to the *Kindergarten Academics* and *Social-Expression* skill clusters, but focused attention emerges as well. As Figure 21 shows, children who are engaged with books, who can stay focused and pay attention, and who recognize their letters tend to do better on third-grade math tests. Those who are proficient in English and have no special needs also tend perform better, as do those who express their needs appropriately, express curiosity for learning, and who can count 10 objects.

**Figure 21: Regression Coefficients for Readiness Skills and Third-Grade Math Scores**



Note: The following variables were entered into the model: gender, English learner status, special needs status, all readiness skills. These variables explain a significant portion of variance in English scores,  $R^2=.26$ ,  $p < .0005$ . The regression is based on 478 children due to missing data on individual readiness skills.

### What child characteristics and early experiences are associated with the readiness skills that appear important to later academic success?

As part of the readiness assessment in 2001, 2002 and 2003, ASR collected background information about children that could be associated with their differing levels of readiness. Children’s status on dimensions that ranged from basic demographics like gender and age, to experience with interventions that are directly related to readiness (e.g., preschool and the Kickoff to Kindergarten program, a summer program to prepare children for entry into kindergarten) was gathered. We performed a follow-up set of regressions to see which child characteristics and experiences are connected to the set of readiness skills that appear important to later academic success. Below are listed the variables that we included in each model; although some of these variables obviously cannot be altered (e.g., gender), the results

**More readiness skills are connected to math achievement than to language achievement**

**Letter recognition and engagement with books remain important**

**Also, connections between math achievement and focused attention, appropriate expression of needs, expressing curiosity for learning, and counting objects emerged**

may pose importance for early childhood interventions and program development.

- Gender
- Age at entry to kindergarten
- Does this child come to school well-rested? (according to the teachers' perspectives)
- Does this child come to school well-fed? (according to the teachers' perspectives)<sup>4</sup>
- Special needs status
- English-proficient versus English Learner status
- Preschool experience
- Experience in the summer transition program called Kickoff to Kindergarten (KTK), sponsored by the Peninsula Partnership for Children, Youth and Families;

Figure 22 provides a summary of results of several regression analyses. The left-hand column in the table contains the readiness variables that we are trying to understand or predict. The remaining columns contain results for each individual predictor: gender, preschool experience, special needs status, English-proficiency, being well-rested (from kindergarten teachers' perspectives), participation in the KTK program, and age at kindergarten entry. The cells of the table contain the standardized beta-weights – how powerful each variable is at helping us to understand each readiness skill. Only those beta-weights that are statistically significant are shown; cells are left blank when a predictor did not play a significant role in helping us understand variations in the readiness skill in question. Recall that the beta coefficients can be compared to one another to determine their relative strengths – a beta-weight of .40 is twice as strong as a beta-weight of .20. Finally, colored highlighting indicates the strength of the association between the predictor and the particular readiness skill, with yellow-shading used to draw attention to the most powerful predictors.

A quick scan of Figure 22 shows that preschool experience and English-proficiency hold the strongest associations across the range of readiness skills. Specifically:

- Having attended a preschool during the year before kindergarten is strongly associated with improved *Kindergarten Academics* and *Social Expression* skills, as well as focused-attention.<sup>5</sup>
- Children who speak English fluently upon entry to kindergarten also tend to be more proficient on key skills.

Importantly, experience with the Kickoff to Kindergarten (KTK) program also is associated with increased readiness. KTK-graduates have higher *Kindergarten Academics* scores, express more curiosity in learning, and are better able to focus their attention than are children who did not have a KTK experience.

Finally, there are certain characteristics of the students themselves that are associated with higher and lower levels of readiness. For example:

- Children who are well-rested tend to do better in most of the key readiness areas;
- Children who are older at kindergarten entry tend to be more proficient on *Kindergarten Academics* and are better able to focus attention.
- Girls tend to be more prepared than boys when it comes to *Kindergarten Academics*, staying focused in the classroom, letter-recognition, and counting.
- Finally, children without special needs also enter kindergarten more skilled at verbal expression, more curious about school, and better able to focus on classroom activities.

**Figure 22: Summary of Regression Results to Understand Those Readiness Skills That Are Associated with Academic Success**

	Gender	Pre-school	No special needs	Eng. proficient	Well-rested	KTK	Age at K entry
<b>Kindergarten Academics</b>	.10	.30		.38	.10	.17	.17
Recognizes the letters of the alphabet	.11	.21		.38		.11	.11
Engages with books		.31		.31	.11	.14	.13
Can count 10 objects correctly	.11	.26		.30	.10	.12	.19
<b>Social Expression</b>		.32		.36	.20	.13	.09
Appropriately expresses needs and wants		.20	.11	.26	.16		
Expresses curiosity and eagerness for learning		.25	.09	.26	.28	.13	.08
Stays focused / pays attention during activities (a <i>Self-Regulation</i> skill)	.15	.21	.15	.14	.24	.13	.13

Note: Each regression analysis was based on between 396 and 400 children. All regression models and adjusted  $R^2$ 's were significant,  $p < .0005$ . Adjusted  $R^2$ 's for each row are as follows: .32, .24, .24, .24, .30, .14, .22, .20. Statistical significance of the beta-weights is noted with colored highlighting: yellow =  $p < .0005$ ; blue =  $p < .01$ ; purple =  $p < .05$ ; white cells with beta-weights = marginally significant,  $p < .10$ ; blank cells represent non-significant betas.

**Who is most prepared on the key readiness skills that are associated with academic success?**

- **Children who went to preschool**
- **Children who attended the KTK summer transitional program**
- **Girls, children older at kindergarten entry, and children with no special needs**
- **Children who are proficient in English**
- **Children who are well-rested**

# Conclusions

## Summary of Findings

The data in this report strongly support the argument that readiness matters. The table below provides a summary of the answers to each of the research questions that inspired this investigation. On all fronts we find important connections between the *Basic Building Blocks* of Readiness and future academic success. We also find a set of disturbing results showing that children who start behind tend to stay behind, with those entering kindergarten less-ready also trailing on academic achievement in later elementary school.

Research Questions	Findings
Overall, how did students perform on their standardized tests?	At 3 <sup>rd</sup> grade, 43% of students meet proficient/advanced targets in English Language Arts (ELA), and 58% meet this target in math. Achievement gaps between students in the sample and San Mateo County students more broadly are particularly wide for 4 <sup>th</sup> grade ELA, 4 <sup>th</sup> grade math, and 5 <sup>th</sup> grade ELA.
What is the academic trajectory of each <i>Readiness Portrait</i> ?	<p><i>All-Stars</i> – children who enter kindergarten near-proficient across all readiness skills – achieve significantly higher scores in ELA at 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grades, and in math at 3<sup>rd</sup> and 4<sup>th</sup> grades. By 5<sup>th</sup> grade their math achievement has dropped so that their scores match those of the <i>Focused-on-the-Facts</i> children.</p> <p><i>Focused-on-the-Facts</i> – children skilled in pre-academics but with needs in the social-emotional arena – are in 2<sup>nd</sup> place. They are behind <i>All-Stars</i> but ahead of <i>Social-Stars</i> and <i>Needs-Prep</i> students. Their trajectory remains fairly stable, although they do catch up to <i>All-Stars</i> in math by 5<sup>th</sup> grade.</p> <p><i>Social-Stars</i> – children with social-emotional strengths but catching-up to do on <i>Kindergarten Academics</i> – are significantly behind <i>All-Stars</i> and <i>Focused-on-the-Facts</i> children in both English and math at 3<sup>rd</sup> and 4<sup>th</sup> grade. By 5<sup>th</sup> grade they catch up to <i>Focused-on-the-Facts</i> in English but are still behind in math.</p> <p><i>Needs-Prep</i> children – those who have much catching up to do on readiness skills at kindergarten – are still far behind in academic achievement in 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grades.</p>

Research Questions (continued)	Findings (continued)
<p>Were children who were less ready for kindergarten able to close the gap?</p>	<p>Gaps are narrower between <i>Needs-Prep</i> students and <i>All-Stars</i> at 3<sup>rd</sup> grade than they were at kindergarten, but this narrowing is due as much to increases among <i>Needs-Prep</i> students as it is due to decreases among <i>All-Star</i> students.</p> <p>Large readiness gaps present in kindergarten between preschooled and non-preschool children, and between English-proficient children and English Learners, have persisted at 3<sup>rd</sup> grade.</p> <p>Readiness gaps between Caucasian/Asian children vs. Latino/Pacific Islander children have actually <u>widened</u> by 3<sup>rd</sup> grade, due to improvements among Caucasian/Asian children and decreases among Pacific Islander children. Latino children held steady.</p>
<p>What readiness dimensions are linked to later school success?</p>	<p>Children who are English-proficient and have no special needs outscore their counterparts on both ELA and math tests at 3<sup>rd</sup> grade.</p> <p><i>Kindergarten Academics</i> is the strongest predictor of ELA and math scores. Children who are high on <i>Kindergarten Academics</i> <u>and</u> high in <i>Social Expression</i> display the greatest boost in test scores.</p>
<p>Which individual skills are most closely linked to later school success?</p>	<p>English Language Arts scores are most closely associated with letter recognition and engagement with books.</p> <p>Math scores at 3<sup>rd</sup> grade are also associated with letter recognition and engagement with books. Being able to stay focused and pay attention yields a strong connection, as well, as does being able to appropriately express needs and wants, expressing curiosity and eagerness for learning, and being able to count 10 objects.</p>
<p>What child characteristics and early experiences are associated with the readiness skills that appear important to later academic success?</p>	<p>Having had a preschool experience and being proficient in English are the strongest predictors of proficiency in the skills listed above. In addition, the following types of children tend to do better:</p> <ul style="list-style-type: none"> <li>▪ Girls;</li> <li>▪ Children who are well-rested;</li> <li>▪ Children who are older at kindergarten entry; and</li> </ul> <p>Those who have attended the Kickoff-to-Kindergarten program.</p>



## Implications

### ***Kindergarten Academics is important, but teaching these skills earlier and earlier is not the answer***

The strength of the associations between *Kindergarten Academics* and academic achievement suggest that children need to have a solid footing in pre-math concepts and pre-literacy skills in order to best scaffold subsequent learning. However, these findings should not be taken as a green-light to start teaching kindergarten academics even earlier to children. Each child’s developmental track is unique, and most toddlers are not equipped to focus for more than 10-15 minutes on a task. In fact, “drill and kill” approaches with young children will likely backfire – they are not developmentally ready, they do not possess the language skills to express their frustration, and acting-out can often result. Indeed, many experts agree that preschool children need social-emotional skills now more than ever, and that the academic achievement that is so coveted can’t be attained without a solid grounding in social-emotional skills (Shellenbarger, 2008; Raver & Knitzer, 2002). These data would underscore that position, as the children who do the best – the *All-Stars* – enter kindergarten with proficiencies not only in *Kindergarten Academics*, but also in *Social Expression* and *Self-Regulation*. The regression results also show that, although *Kindergarten Academics* scores explain a large portion of the variance in English and mathematics standardized test scores, it is the children who adept in both *Kindergarten Academics* and *Social Expression* (the *Basic Building Block* that contains many of the most language-relevant skills) who exhibit the highest test scores. Because grooming social/emotional skills takes years – a lifetime even! – this should remain the focus of early education.

### **Study is needed to determine how better to support English Learners**

The consistent findings that English Learners trail their English-proficient counterparts underscore that these children need extra supports in order to realize their potential. As a group – and they are a diverse group, with many different languages, cultures, and ethnicities represented – these children are not as successful in the current school system as they likely could be. This issue needs great focus to determine what system-changes are necessary so that English Learners have just as much opportunity for academic success as do children who start school already proficient in English. For example:

- Extra resources may be required so that schools can actively engage parents who do not speak English;
- Schools may need to be clearer about how families can support education at home, especially because different cultures hold different attitudes toward schools and the role of teachers; and
- The issue about how to best (and most quickly) encourage English-proficiency among English Learners has not been solved. Some children achieve redesignation as English-proficient within a period of months, whereas redesignation can take years for others. More study on how best to support all English Learners in the daunting task of language acquisition – while still learning academic content – is

needed.

### The importance of early education

These findings also point to early education interventions that appear to hold great promise. Preschool experience is associated with higher proficiencies in just those readiness skills that are connected to academic achievement. We know from deeper analysis of our more recent readiness assessment data that preschool experience appears to make the biggest difference in *Kindergarten Academics* scores, even after controlling for the many family dimensions on which preschool children are likely to differ from their non-preschooled peers (e.g., maternal education levels, family income). In addition, among some “at-risk” children who tended to have lower readiness scores, preschool experience is associated with some readiness boosts. This was especially true for boys, Latino students, students without English as a primary household language, English Learners, and children who were not exposed to daily reading at home. [For a full description of these findings, see the chapter entitled *A Closer Look at Associations Between Preschool & Readiness* (p. 227) in the report entitled “Are Children Ready For School? Assessment of Kindergarten Readiness in San Mateo and Santa Clara Counties: Comprehensive Report 2005.”]

Summer transitional programs wherein children attend “school” for a few weeks prior to kindergarten entry would also seem to hold great potential. ASR has conducted several rigorous evaluations of the Kickoff to Kindergarten program, finding that children make significant progress in raising their readiness scores over the course of the program, entering kindergarten with significantly higher readiness scores than matched peers. Moreover, the program is particularly effective for English Learners who have not had a prior preschool experience. In fact, children at higher risk seem to benefit the most. (Applied Survey Research, 2006). Because this program appears to be a good intervention for English Learners, program developers might consider launching similar efforts in Santa Clara County.

### Study Limitations

It is important to be clear about the limitations of this analysis:

- Key findings included in this paper are based on regression analyses. Regression shows independent associations among variables, but it can shed no light on the causes of differences in academic achievement. Although we can say, for example, that preschool experience is associated with higher readiness scores, we cannot say that preschool causes higher readiness.
- Findings are based on children who were enrolled in kindergarten in five relatively high-needs districts in San Mateo County in 2001, 2002, and 2003. A similar exploration of the links between readiness and academic achievement among a strikingly different population of children may or may not yield the same results.
- Our conception of readiness is broad, encompassing more than just the academic dimension of children. However, our only outcome measures of school success are

academic in nature – based solely on the California Standardized Test English Language Arts and Mathematics tests. Social-emotional outcome measures for third, fourth, and fifth grades were not available. Thus, this report provides an exploration of a fairly narrow definition of academic success – performance on standardized tests. As discussed below, for a more comprehensive view of how and where readiness matters, we would urge the development of standardized and comprehensive measures of children’s well-being so that factors in addition to standardized test performance can be taken into account.

## Future Research Questions

As always, research often raises as many questions as it answers. In our case, we are thinking further along many lines, including:

- **Can we develop social-emotional measures of achievement so as to include more than academic outcomes in such analysis?**

The readiness assessments in San Mateo and Santa Clara counties provide a standardized, population-based snapshot of children’s readiness skills – both pre-academic and social-emotional – upon kindergarten entry. Thanks to the standardized test scores recorded for elementary students, we can examine how readiness is linked to children’s academic success. However, this paper sheds no light on how readiness is linked to other aspects of well-adjusted children because no standardized, social-emotional measures are gathered for all children in elementary school – or, for that matter, among children younger than kindergarten-age.

One strong research need as we try to understand well-being of the whole child are solid (i.e., both reliable and valid) social-emotional measures for young children. The social-emotional *Basic Building Blocks* have respectable reliability (with alpha coefficients of .90 for *Social Expression* and .93 for *Self-Regulation*). However, social-emotional scales that are included in many large data sets are not as robust – nor are the scales as psychometrically sound as are the academic measures (we thank Dr. Claire Kopp for raising this issue). As researchers of young children and early elementary education, we desperately need standardized measures of the social-emotional well-being of children that are systematically collected among very young children as well as for children in later elementary school years. With such information, we could paint a well-rounded picture of how children develop prior to school-entry, and how readiness launches children to excel in school.

- **How are the strengths and needs of local families related to the academic success of their children?**

Because the early readiness assessments did not include much information about the family, we were not able to include family demographics or other indicators of family-functioning into our regression analyses. However, there are many aspects of children and families that would presumably impact academic achievement.

For example, it remains to be seen how maternal education, values about school, family resources, and many other factors influence the associations between readiness and academic success. Because the Santa Clara County 2004, 2005, and 2006 readiness assessments included the *Parent Information Form*, in the next few years we should be able to directly examine how family factors combine with readiness scores to help us understand children’s later academic performance.

- **What does the persistence of achievement differences across our *Readiness Portraits* mean for how schools are working with the different portraits?**

Being a *Needs-Prep* student should not mean a several-year sentence of underachievement. We need a better understanding of how schools are working with the children belonging to the different *Readiness Portraits* in order to launch more children on successful academic careers.

- **Are the schools ready for the children? Are families ready for their children to enter school?**

School readiness encompasses more than just the skills with which children enter kindergarten. Schools need to be ready for the great diversity of children that they welcome, and families need to be ready to successfully support their children’s education. Recently, a group of academic and practitioner experts from Santa Clara and San Mateo counties developed a set of joint recommendations to help schools, families, and communities better support children to be successful in school and life (“How to Support School Readiness & Success of Children, Families, & Schools”). At the core of these recommendations:

- Schools must expect achievement from all children, teach to the individual child, and take responsibility for results
- Mentoring and professional development opportunities need to be offered to teachers to better support their development
- Curricula should integrate the principles of child development
- Families need mentoring and support, as family stress impacts children’s learning
- “Easy” family practices foster the skills that children need – activities like reading at home, limiting screen time, establishing routines, and doing chores
- There need to be better connections built between home, school, and the community to foster dialogue

In the next few years, the Santa Clara County Partnership for School Readiness looks forward to making progress on these issues – and many others – in an effort to fulfill its mission of ensuring that children have the greatest chance for success in school and in life.

# Endnotes

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- 1 An important note about confidentiality: The California Education Code makes provisions for organizations like ASR to assess students for educational research purposes, without parent permission, pursuant to Section 49076 (b)(5) (see <http://caselaw.lp.findlaw.com/cacodes/edc/49073-49079.html> ). However, ASR is sensitive to districts' confidentiality concerns and therefore has put in safeguards so that ASR will not know the true identity of the students assessed, or their parents. To guard students' confidentiality, teachers are instructed not to list students' names on any materials, and ASR does not collect or record students' names anywhere on the assessment tools or in the data files. The readiness tools do require the child's initials and birth date. These identifiers are needed to a) communicate with a teacher about a child's form if the information is illegible or incomplete, and b) link each child's parent survey to their kindergarten assessment. To further protect children's confidentiality, ASR does not release the identifiers of children to anyone. Data are only reported in the aggregate. Further, school or district level data are only released to those jurisdictions if school administrators agree to use the data for planning or illustrative purposes, not generalization purposes.
- 2 Readers who are familiar with ASR's other assessment reports, please note that our discussion of the *Basic Building Blocks* for assessments in 2004, 2005, and 2006 includes items that were added to the *KOF* in later years (e.g., the "coping skills"). Although these newer items have been incorporated into the most recent *Basic Building Blocks* scheme, they are not included in this discussion of readiness.
- 3 For a more comprehensive discussion of readiness differences by ethnicity, please see the report entitled "Are Children Ready For School? Assessment of Kindergarten Readiness in San Mateo and Santa Clara Counties: Comprehensive Report 2005", which can be downloaded at [www.appliedsurveyresearch.org](http://www.appliedsurveyresearch.org). Interested readers may also contact Applied Survey Research at 408.247.8319 to request access to unpublished data memos.
- 4 A column for this variable – Does this child come to school well-fed? – is not included in Figure 20 because it did not yield any significant associations with the most important readiness variables.
- 5 Although the readiness assessments do not assess preschool quality, there are some indications from previous data that preschools in San Mateo County may be particularly strong. In the 2005 readiness assessment in San Mateo and Santa Clara counties, we found that different types of at-risk children who attended preschools in San Mateo County entered kindergarten at par with children who were not at-risk across most *Basic Building Blocks* dimensions. This "buffering effect" was stronger than the "buffering effect" for preschools in Santa Clara County. When a longitudinal analysis is completed for Santa Clara County, we may find different associations between preschool and key readiness skills. For a full discussion of the 2005 differences, please see the chapter entitled *A Closer Look at Associations Between Preschool & Readiness* in the report "Are Children Ready For School? Assessment of Kindergarten Readiness in San Mateo and Santa Clara Counties: Comprehensive Report 2005", which can be downloaded at [www.appliedsurveyresearch.org](http://www.appliedsurveyresearch.org).

# Acknowledgements

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- American Leadership Forum - Silicon Valley
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- Deanna Gomby Consulting
- First 5 of Santa Clara County
- John S. and James L. Knight Foundation
- Junior League of San Jose
- Kids in Common
- Local Planning Council of Santa Clara County
- Morgan Family Foundation
- San Jose State University
- Santa Clara County Office of Education
- Silicon Valley Community Foundation
- United Way Silicon Valley
- WestEd
- Yes Reading

The Partnership for School Readiness would like to join ASR in thanking the following individuals for their help in the completion of this project. We appreciate the support of the Superintendents and Assistant Superintendents in granting ASR access to their student data, and we especially thank the technology staff at each district for providing ASR with the data that made these analyses possible. Critical to the project's success were:

- Dr. Jean Holbrook, County Superintendent Schools, San Mateo County, for explaining the project to and seeking the support of the superintendents of the eight districts in which readiness assessments had taken place in 2001;2002 and 2003;
- Cabrillo Unified District: Past Superintendent Dr. John Bayless, Current Superintendent Robert Gaskill, and Anne Bailey
- Jefferson School District: Past Superintendent Dr. Barbara Wilson, Interim Superintendent John McIntosh, Jeff Davies, Bruce Erickson, and Karyn Wong
- Ravenswood City School District: Superintendent Maria De La Vega, Kenneth Bazan
- Redwood City Elementary District: Superintendent Jan Christensen, Eileen Horng
- South San Francisco Unified District: Superintendent Barbara Olds, Charlene Baumgardner, and Erica Chan



# About the Research Sponsor

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## The Santa Clara County Partnership for School Readiness

In 2001, a group of public and private funders who focus on early childhood development formed the Santa Clara County Partnership for School Readiness. The Partnership's focus is to:

- Help families, caregivers, and teachers support children as they develop the skills they need for school;
- Build systems to ensure that more of our children arrive at school "ready"; and
- Make sure that the schools are ready to support the diverse sets of skills that children actually bring to kindergarten.

Before resources could be strategically targeted to accomplish these ends, a clear picture of children's readiness skills in Santa Clara County was needed. As no quantitative information existed about the readiness of children at that time, the first step was to build a solid knowledge base. To determine the state of kindergarten readiness across the county, the Partnership launched a three-year benchmark assessment beginning in Fall 2004. In collaboration with Applied Survey Research, the Partnership assessed the readiness of random samples of Santa Clara County kindergarten students in 2004, 2005 and 2006. The goal of these assessments was to understand just how ready children are for school – and where interventions may enhance the likelihood of school success.

The Partnership was able to use as a starting point the methodology and assessment tools that San Mateo County had created in 2001 – the assessment projects that serve as the core of this report. However, the Partnership extended and modified the methodology in a few important ways:

- Specifically, the Partnership moved from a sampling of specific districts to a broader sample that was generalizable to the entire county. (Indeed, San Mateo County followed this approach in a joint San Mateo County – Santa Clara County readiness assessment in 2005).
- Moreover, the Partnership created some key assessment tools. In addition to the *Kindergarten Observation Form*, assessments in Santa Clara County include the *Parent Information Form*, a teacher survey, and a *Kindergarten Observation Form II* that focused on the quality of children's transitions into school. These important extensions to the basic assessment methodology have allowed a much deeper analysis of the data than was possible in 2001-2003.

Beginning as an engine to generate public awareness of school readiness in the county, the Partnership is now committed to determining the best ways to support children, families, and schools. To ensure children have the greatest chance for success in school and in life,

the Partnership is working to:

- Promote the strategic use of resources;
- Provide guidance to discussions of policy; and
- Inspire the creation of flagship systems that embody the coordinated efforts described herein.

For more information about the Partnership for School Readiness, contact:

Lori Burns, Director  
c/o United Way Silicon Valley  
lori.burns@uwsv.org  
408-741-1724

# About the Researcher

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ASR is a nonprofit, social research firm dedicated to helping people build better communities by creating meaningful evaluative and assessment data, facilitating information-based planning, and developing custom strategies. Incorporated in 1981, the firm has over twenty-five years of experience working with public and private agencies, health and human service organizations, city and county offices, school districts, institutions of higher learning, and charitable foundations.

Through community assessments, program evaluations, and related studies, ASR provides the information that communities need for effective strategic planning and community interventions. For questions about this report, please contact:

Applied Survey Research

Lisa Colvig-Amir, M.A. Ed., Director of Evaluation

Lynne Mobilio, Ph.D., Director of Research

San Jose Office

408.247.8319

*[www.appliedsurveyresearch.org](http://www.appliedsurveyresearch.org)*

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# Appendix 1: The Kindergarten Observation Form

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The following pages display the *Kindergarten Observation Forms* used in each readiness assessment in 2001, 2002 and 2003.

# Kindergarten Observation Form

A Pilot Project of the Peninsula Partnership for Children, Youth and Families and the San Mateo County Children and Families First Commission

© PENINSULA PARTNERSHIP FOR CHILDREN, YOUTH AND FAMILIES

## Instructions

This form is intended for you to observe the various skills and attributes your students possess at entrance to your kindergarten class. This information will be vital to curricular enhancements in schools as well as early learning programs. Absolutely no individual child's information will be released by the researchers.

Complete one Observation Form per child during the third week of classroom activities. This is to ensure that the child has had a chance to adjust to the typical classroom structure and has had the opportunity to demonstrate observable skills and behaviors. Children should be observed in as natural a setting as possible within their daily activities; you do not need to create test situations with individual children.

To complete the Observation Form, please follow these steps:

1. Please complete the child's demographic information at right.
2. After completing the child's demographic information, turn this page over and complete the skill and attribute checklist.
3. After you have completed both sides of this form, please send all completed forms together (envelope provided) for processing to Applied Survey Research, P.O. Box 1927, Watsonville, Ca., 95077.

If you have any questions about the observation process, please call Applied Survey Research at 831-728-1356.

Thank you for your participation!

## Child Demographic Information *Please circle, check, or write in your responses.*

1. Teacher's Name:		_____
2. School Name:		_____
3a. Child's Initials:	3b. Child's Sex:	<i>Male Female</i>
3c. Child's District ID Number:		_____
4. Child's Month, Day and Year of Birth:		_____
5. Today's Date:	5a. Start date of instruction:	_____
6. Has this child participated in any of the following educational programs:		_____
- A formal, curriculum-based <u>preschool</u> program?		<i>Yes No Info not avail.</i>
- Head Start?		<i>Yes No Info not avail.</i>
- Pre toThree? <i>(Home visiting program for MediCal-eligible mothers and infants)</i>		<i>Yes No Info not avail.</i>
- Raising a Reader? <i>(Red Book Bag program)</i>		<i>Yes No Info not avail.</i>
- SummerTransitional <i>(Pre-K) Program?</i>		<i>Yes No Info not avail.</i>
- Other (specify):		_____
7a. Does this child generally come to school well-rested?		<i>Yes No Info not avail.</i>
7b. Does this child generally come to school well-fed?		<i>Yes No Info not avail.</i>
7c. Does this child have any <u>special needs or disabilities</u> , as identified by Special Needs Status or an IEP ?		<i>Yes No Info not avail.</i>
- If yes, please specify:		_____
7d. Is English this child's <u>primary language</u> ?		<i>Yes No Info not avail.</i>
8. Child's Primary Ethnicity:		
<input type="checkbox"/> Latino	<input type="checkbox"/> Caucasian (including Arabic / Middle Eastern)	
<input type="checkbox"/> Asian	<input type="checkbox"/> Multi-ethnic	
<input type="checkbox"/> Native-American	<input type="checkbox"/> Other (specify): _____	
<input type="checkbox"/> Pacific Islander	<input type="checkbox"/> Don't know	
<input type="checkbox"/> African-American		

—————▶  
**Please Turn The Page**



# Kindergarten Observation Form

**Proficient:** Demonstrates skill, knowledge, behavior consistently and competently  
**In Progress:** Demonstrates skill, knowledge, behavior occasionally and somewhat competently; has room for improvement  
**Beginning:** Child is just beginning to demonstrate skill, knowledge, behavior  
**Not Yet:** Child does not demonstrate skill, knowledge, or behavior

<i>How would you rate this child's skill, knowledge and behaviors in terms of the following:</i>		NOT YET 1	BEGINNING 2	IN PROGRESS 3	PROFICIENT 4	Don't know/ Not observed	Comments
Physical Well-being & Motor Development	Use of small manipulatives such as crayons, paintbrush, buttons, zippers, etc.						
	Has general coordination on playground (e.g. kicking balls, running, climbing)						
	Performs basic self-help / self-care tasks (toileting, eating, washing hands)						
Social & Emotional Development	Relates appropriately to adults other than parent / caregiver (converses with, seeks help from)						
	Appropriately expresses needs and wants verbally in primary language						
	Works and plays cooperatively with peers (takes turns and shares)						
	Controls impulses and self-regulates (is not disruptive of others or class)						
Approaches Toward Learning	Expresses curiosity and eagerness for learning (tries new activities, asks questions)						
	Stays focused / pays attention during activities						
	Follows one- to two-step directions						
	Participates successfully in <b>circle time</b> (listens, focuses, sits still, participates)						
Communication & Language Usage	Has expressive abilities (e.g. tells about a story or experience in response to a prompt)						
	Knows the letters of the alphabet						
	Writes own name						
	Engages with books (knows where a book starts, associates print with storyline, pretends to read)						
Cognition & General Knowledge	Engages in symbolic / imaginative play with self or peers (e.g. plays house, fireman)						
	Understands that numbers represent quantity ("Please give Maria three crayons")						
	Can count 10 objects correctly						
	Recognizes primary colors						
	Recognizes primary shapes (circle, triangle, square)						

# Kindergarten Observation Form 2002

A Project of the Peninsula Partnership for Children, Youth and Families, San Mateo County Office of Education, and San Mateo County Children and Families First Commission



## Instructions

This form is intended for you to observe the various skills and attributes your students possess at entrance to your kindergarten class. This information will be vital to curricular enhancements in schools as well as early learning programs. Absolutely no individual child's information will be released by the researchers.

Complete one Observation Form per child during the third week of classroom activities. This is to ensure that the child has had a chance to adjust to the typical classroom structure and has had the opportunity to demonstrate observable skills and behaviors. Children should be observed in as natural a setting as possible within their daily activities.

To complete the Observation Form, please follow these steps:

1. Please complete the child's demographic information at right.
2. After completing the child's demographic information, turn this page over and complete the skill and attribute checklist.
3. After you have completed both sides of this form, please send all completed forms together (stamped envelope provided) for processing to Applied Survey Research, P.O. Box 1927, Watsonville, CA., 95077.

If you have any questions about the observation process, please call Lisa or Meg at Applied Survey Research at 831-728-1356.

Thank you for your participation!

## Child Demographic Information

1. Teacher's last name:	2. School name:
3a. Child's initials:	3b. Child's Sex: <i>Male</i> <i>Female</i>
3c. Child's mother's first name:	
3d. Child's District ID number:	
4. Child's date of birth: Month _____ Day _____ Year _____	
5. Today's date: Month _____ Day _____	5a. Start date of instruction: Month _____ Day _____
6. Has this child participated in any of the following educational programs:	
- A formal, curriculum-based <u>preschool</u> program?	Yes No Info not avail.
- Head Start?	Yes No Info not avail.
- Pre to Three? ( <i>Home visiting program for mothers and infants eligible for Medi-Cal</i> )	Yes No Info not avail.
- Raising a Reader? ( <i>Red Book Bag program</i> )	Yes No Info not avail.
- Summer Transitional Program? ( <i>Pre-K program</i> )	Yes No Info not avail.
7a. Does this child generally come to school well-rested?	Yes No Info not avail.
7b. Does this child generally come to school well-fed?	Yes No Info not avail.
7c. Does this child have any <u>special needs</u> , as identified by Special Needs Status or an IEP?	Yes No Info not avail.
- If yes, please specify:	
7d. Is this child an <u>English Learner</u> ?	Yes No Info not avail.
- If yes, are you able to communicate with the child enough to complete items #13, 18, 20, 21, 25, 26, and 27 of this observation form?	Yes No
8. Child's Primary Ethnicity:	
<input type="checkbox"/> Latino	<input type="checkbox"/> Caucasian (including Arabic / Middle Eastern)
<input type="checkbox"/> Asian	<input type="checkbox"/> Multi-ethnic
<input type="checkbox"/> Native-American	<input type="checkbox"/> Other (specify): _____
<input type="checkbox"/> Pacific Islander	<input type="checkbox"/> Don't know
<input type="checkbox"/> African-American	

—————→  
Please Turn The Page

# Kindergarten Observation Form 2002

**Proficient:** Demonstrates skill, knowledge, behavior consistently and competently; **performs independently**  
**In Progress:** Demonstrates skill, knowledge, behavior occasionally and somewhat competently; has room for improvement, needs minor or **occasional assistance**  
**Beginning:** Child is just beginning to demonstrate skill, knowledge, behavior; needs significant or **frequent assistance**  
**Not Yet:** Child does not demonstrate skill, knowledge, or behavior yet; **cannot perform without assistance**

<i>How would you rate this child's skill, knowledge and behaviors in terms of the following:</i>		NOT YET 1	BEGINNING 2	IN PROGRESS 3	PROFICIENT 4	Don't know/ Not observed	Comments / Notes
Physical Well-being & Motor Development	9. Use of small manipulatives such as crayons, paintbrush, buttons, zippers, etc.						
	10. Has general coordination on playground (kicking balls, running, climbing)						
	11. Performs basic self-help / self-care tasks (toileting, eating, washing hands)						
Social & Emotional Development	12. Relates appropriately to adults other than parent / caregiver (converses with, seeks help from)						
	13. Appropriately expresses needs and wants verbally in primary language						
	14. Works and plays cooperatively with peers (takes turns and shares)						
	15. Controls impulses and self-regulates (is not disruptive of others or class)						
Approaches Toward Learning	16. Expresses curiosity and eagerness for learning (tries new activities, asks questions)						
	17. Stays focused / pays attention during activities						
	18. Follows one- to two-step directions						
	19. Participates successfully in circle time (listens, focuses, sits still, participates)						
Communication & Language Usage	20. Has expressive abilities (tells about a story or experience in response to a prompt)	None	1 – 12 letters	13 – 25 letters	All 26 letters		
	21. Recognizes the letters of the alphabet (note: may be CAPs, lowercase or combination)						
	22. Writes own name (spelling and writing all letters correctly)						
	23. Engages with books (knows where a book starts, associates print with storyline, pretends to read)						
Cognition & General Knowledge	24. Engages in symbolic / imaginative play with self or peers (plays house, fireman)	None	1 – 5 objects	6 – 9 objects	All 10 objects		
	25. Can count 10 objects correctly ("Please give Maria five crayons, please hand Celia 10")	None	1 – 4 colors	5 – 7 colors	All 8 colors		
	26. Recognizes primary colors (Crayola basic 8)	None	1 shape	2 shapes	All 3 shapes		
	27. Recognizes primary shapes (circle, triangle, square)						

# Kindergarten Observation Form 2003

A Project of the Peninsula Partnership for Children, Youth and Families, San Mateo County Office of Education, First 5 San Mateo County and Applied Survey Research



peninsula  
partnership for children,  
youth and families  
An Initiative of Peninsula Community Foundation  
and San Mateo County

## Instructions

This form is intended for you to observe the various skills and attributes your students possess at entrance to your kindergarten class. This information will be vital to curricular enhancements in schools as well as early learning programs. Absolutely no individual child's information will be released by the researchers.

Complete one Observation Form per child during the third week of classroom activities. This is to ensure that the child has had a chance to adjust to the typical classroom structure and has had the opportunity to demonstrate observable skills and behaviors. Children should be observed in as natural a setting as possible within their daily activities.

To complete the Observation Form, please follow these steps:

1. Please complete the child's demographic information at right.
2. After completing the child's demographic information, turn this page over and complete the skill and attribute checklist.
3. Please send completed forms together (stamped envelope provided) for processing to Applied Survey Research, 2625 Zanker Road, San Jose, Ca. 95134.

If you have any questions about the observation process, please call Lisa Colvig-Amir, Applied Survey Research at 408-944-0606.

**Thank you for your participation!**

## Child Demographic Information

1. Teacher's last name: _____			2. School name: _____		
3a. Child's initials:	First	Middle	Last	3b. Child's Sex:	Male Female
3c. Child's date of birth:	Month	Day	Year	3d. Child's District ID number:	_____
4a. Child's mother's initials:	First	Middle	Last	4b. Mother's date of birth:	Month Day Year
5a. Today's date:	Month	Day		5b. Start date of instruction:	Month Day
6. Has this child participated in any of the following educational programs:					
a. A curriculum-based preschool program (part day enrichment or embedded in full day program)			Yes No Info not avail.		
b. Head Start?			Yes No Info not avail.		
c. Raising a Reader? ("Red Book Bag program")			Yes No Info not avail.		
d. Kickoff to Kindergarten Program? ("Peninsula Partnership's Summer Transitional program")			Yes No Info not avail.		
7a. Does this child generally come to school well-rested?			Yes No Info not avail.		
7b. Does this child generally come to school well-fed?			Yes No Info not avail.		
7c. Does this child have any special needs, as identified by Special Needs Status or an IEP?			Yes No Info not avail.		
- If yes, please specify: _____					
7d. Is this child an English Learner?			Yes No Info not avail.		
7e. If yes, are you able to communicate with the child enough to complete items #13, 18, 20, 21, 23, 26, 27, and 28 of this observation form?			Yes No IF NO, PLEASE DO NOT ASSESS CHILD ON THESE ITEMS		
7f. If you are able to communicate with the child, will the child be assessed in his or her home language?			Yes No		
7g. If yes, what language? Spanish Other: _____					
8. Child's Primary Ethnicity:					
<input type="checkbox"/> Latino		<input type="checkbox"/> Caucasian/White (including Arabic / Middle Eastern)			
<input type="checkbox"/> Asian		<input type="checkbox"/> Multi-ethnic			
<input type="checkbox"/> Native-American		<input type="checkbox"/> Other: _____			
<input type="checkbox"/> Pacific Islander		<input type="checkbox"/> Don't know			
<input type="checkbox"/> African-American					

—————▶  
**Please Turn The Page**

# Kindergarten Observation Form 2003

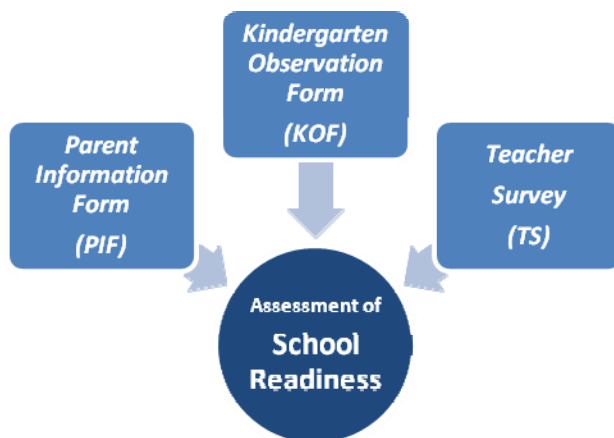
**Proficient:** Demonstrates skill, knowledge, behavior consistently and competently; **performs independently**  
**In Progress:** Demonstrates skill, knowledge, behavior occasionally and somewhat competently; has room for improvement, needs minor or **occasional assistance**  
**Beginning:** Child is just beginning to demonstrate skill, knowledge, behavior; needs significant or **frequent assistance**  
**Not Yet:** Child does not demonstrate skill, knowledge, or behavior yet; **cannot perform without assistance**

<i>How would you rate this child's competency in terms of the following skills, knowledge and behaviors:</i>		NOT YET 1	BEGINNING 2	IN PROGRESS 3	PROFICIENT 4	Don't know/ Not observed	Comments / Notes
Physical Well-being & Motor Development	9. Use of small manipulatives such as crayons, paintbrush, buttons, zippers, etc.						
	10. Has general coordination on playground (kicking balls, running, climbing)						
	11. Performs basic self-help / self-care tasks (toileting, eating, washing hands)						
Social & Emotional Development	12. Relates appropriately to adults other than parent/primary caregiver (converses with, seeks help from)						
	13. Appropriately expresses needs and wants verbally in primary language						
	14. Works and plays cooperatively with peers (takes turns and shares, helps others)						
	15. Controls impulses and self-regulates (is not disruptive of others or class)						
Approaches Toward Learning	16. Expresses curiosity and eagerness for learning (tries new activities, asks questions)						
	17. Stays focused / pays attention during activities						
	18. Follows one- to two-step directions						
	19. Participates successfully in <b>circle time</b> (listens, focuses, sits still, engages)						
Communication & Language Usage	20. Has expressive abilities (tells about a story or experience in response to a prompt)						
	21. Recognizes the letters of the alphabet (note: may be CAPs, lowercase or combination)	None	1 – 12 letters	13 – 25 letters	All 26 letters		
	22. Writes own first name (spelling and writing all letters correctly)						
	23. Can recognize rhyming words (“ <i>Shoe</i> ’ rhymes with ‘ <i>Glue</i> .’ Does ‘ <i>Blue</i> ’? Does ‘ <i>Dog</i> ’?”)						
	24. Engages with books (knows where a book starts, associates print with storyline, pretends to read)						
Cognition & General Knowledge	25. Engages in symbolic / imaginative play with self or peers (plays house, fire station)						
	26. Can count 10 objects correctly (“ <i>Please give Maria 5 crayons</i> ” or “ <i>Please put 10 blocks in the basket</i> ”)	None	1 – 5 objects	6 – 9 objects	All 10 objects		
	27. Recognizes primary colors (Crayola basic 8: red, orange, yellow, green, blue, purple, brown, and black)	None	1 – 4 colors	5 – 7 colors	All 8 colors		
	28. Recognizes primary shapes (circle, triangle, square)	None	1 shape	2 shapes	All 3 shapes		

## Appendix 2: A Description of ASR's More Recent Assessment Methodology

Since 2003, ASR has fine-tuned and developed its readiness assessment methodology in order to draw an even richer portrait of communities' and districts' school readiness. Currently, ASR draws upon three sources of information to describe the readiness of children entering kindergarten, and to explore the factors that support and hinder children's readiness for school.

- Teachers complete the *Kindergarten Observation Form* for every student in their class, reporting whether each student is "not yet," "just beginning," "in progress," or "proficient" in 20 readiness skills. ASR seeks passive consent for the assessment, and typically just 4-5% of parents opt their children out of the assessment. (A copy of the *KOF* can be found in Appendix 1.)
- Teachers complete a *Teacher Survey* to communicate their views and priorities for readiness, including how proficient children should be in each skill area to facilitate a smooth transition into kindergarten.
- Finally, parents of children in sampled classrooms are asked to complete a fairly lengthy *Parent Information Form*, providing information about their child's early care and education experiences, the family climate, their child's response to conflict and frustration, sources of social support in the home, and basic demographics, to name a few dimensions.



More detail regarding this assessment methodology, as well as samples of the tools, can be obtained by calling Applied Survey Research at 408.247.8319.