School Readiness in Alameda County 2010

Results of the Fall 2010 Assessment

RESEARCH STUDY FUNDED BY:

FIRST 5 ALAMEDA COUNTY every child counts

THE Thomas J. Long FOUNDATION

ASR

Applied Survey Research
P.O. Box 1927
Watsonville, CA 95077
(831) 728-1356

991 West Hedding St., Suite 102
San José, CA 95126
(408) 247-8319

www.appliedsurveyresearch.org

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Participating Alameda County Districts, Schools, and Teachers

Districts	Schools	Teachers
Berkeley Unified School District	Cragmont	Michelle Johnson
		Kellie McElhaney
		Erica Rojo
	Emerson	Kim Shevelson
		Stefanie Maida
	John Muir	Barbara Vogel
		Caroline Kim
	LeConte	Ashley Trinh
		Natalia Bernal
	Malcolm X	Candyce Cannon
		David Seegal
		Cynthia Allman
	Oxford	Renee Harris
	Thousand Oaks	Sanjuana Cavazos
		Elizabeth (Libby) Trumball
	Washington	Thuy-Mi (Mimi) Dang
Castro Valley Unified School District	Marshall Elementary	Cathy Dostal
		Jamie Hora
	Castro Valley Elementary	Vicki Limnios
Emery Unified School District	Anna Yates	Shoshannah Walker
		Mariena Kuoch
		Elisabeth Berkson
Hayward Unified School District	Bidwell/Treeview	David Beaston
		Heather Thompson
		Jennifer Donovan
	Burbank	Sandra Baerwald
		Carmen Guerrero
		Paula Lawrence
	Cherryland	Marie Echaves
		Adriana Gonzalez
	Faith Ringgold	Maranatha Shinoda
	Glassbrook	Lorena Martin
	Harder	Sarah Zegarra
	Palma Ceia	Diane Crawford
	Strobridge	Cynthia Shay
		Joan Tarle
	Stonebrae	Christine Montenegro
	Tyrrell	Irene Sanchez
		Torri Bryant
Livermore Joint Unified School District	Smith Elementary	Shirley Shaw
		Erin Summers
		Leslie Williams

Districts	Schools	Teachers
		Rita Khoury
	Marylin Avenue Elementary	Karen Woodward
		Maria Ramirez
		Debbie Anderson
		Jan Bachtold
		Lori Olsen
	Croce Elementary	Lynda Helms
		Elise Allen
Oakland Unified School District	International Community School	Cristina Rojas
		Elena Vargas
		Deveny Dawson
	Reach Academy	Paul Smith
	Lakeview	Tavia Anderson
	Lafayette	Carmen Hendon
	Sobrante Park	Sophia Kinsley
	Markham	Patricia Nunley
	Brookfield Village	Nuria Martinez
		Linda Walton
		Luz Zurita
	Laurel	Grace Tse
Pleasanton Unified School District	Lydiksen	Julie Stewart
	Alisal	Melinda Firpo
		Kari Barwick
	Hearst	Kelly Maher
	Valley View	Elicha Gastelumendi
		Laura Wenstrand
San Lorenzo Unified School District	Corvallis	Kirsten Hynds
	Grant	Julie Henderson
		Kathy Hutchinson
	Colonial Acres	Yolanda Arredondo
	Del Rey	Lisa Rheinheimer
	Hillside	Dora Rios
		Kathleen LaCome
		Ann Villegas
	Bay	Noelle Sanhueza
		Geraldine Whitmore
		Theresa Lewis
	Dayton	Denise Landry
		Janice Hansson
		Tracy Cooper

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Snapshot of the 2010 School Readiness Assessment

Background

In 2010, First 5 Alameda County (F5AC) commissioned an assessment of the school readiness levels of new kindergarten students for the third consecutive year. Participating districts in the 2010 assessment included Berkeley, Castro Valley, Emery, Hayward, Livermore Valley Joint, Oakland, Pleasanton, and San Lorenzo Unified School Districts.

The assessment included four measurement instruments completed by teachers and parents of entering kindergarten students. Teachers indicated each of their students' proficiency levels on 24 readiness skills and they reported how smoothly students had transitioned into kindergarten. Parents completed a survey that asked them to provide information about children's early care and family environments, as well as basic demographic and background information. Finally, teachers completed a survey about their beliefs about the skills children need for school. Please note that the information presented in this report describes the students and families assessed.

Findings

Research Question	Conclusion and Data Highlights
1. How ready for school were children assessed in Alameda County?	• **Overall readiness score: 3.29 (on a four-point scale of readiness skill proficiency)** • For each individual readiness skill, children were scored on a scale from *Not yet* (1) to *Proficient* (4). Scores were highest in the *Self-Care & Motor Skills* area (3.52) and lowest for *Self-Regulation* (3.20). • Though most students were meeting or exceeding the levels of proficiency their teachers felt they needed to have at kindergarten entry, 23% of students fell far below their teachers' expectations in the area of *Self-Regulation*.
2. What factors are associated with higher levels of school readiness?	• Findings revealed that **child well-being** (not being hungry, tired, or ill) was the strongest predictor of readiness. • In addition **to demographic factors** that were related to readiness (e.g. age, gender, etc.), children who were **not born with a low birth weight** were more ready for school. • When children had attended **preschool** they also tended to have better readiness outcomes. • Families who received specific **information about how ready their child was for school** prior to kindergarten and/or who reported more **positive attitudes toward parenting** had children who were more ready.
3. What is the relationship between F5AC programs and children's school readiness?	• After controlling for demographic and SES differences, results revealed that **F5AC Summer Pre-K** students were more ready for school than children with no preschool experience in all areas except *Kindergarten Academics*, in which there was a trend for enhanced readiness in SPK students that did not reach statistical significance. • Participation in the **Intensive Family Support Case Management** program was also associated with gains in readiness.

Executive Summary

Background

Each fall, Alameda County schools and teachers welcome a diverse mix of students into their classrooms to start school. The diversity of this student population encompasses not only ethnic, linguistic, and socioeconomic differences, but also differences in how well-equipped they are with the skills they need to launch successful school careers.

To help ensure that students entering school have every opportunity to succeed, First 5 Alameda County (F5AC) provides a comprehensive set of services and supports that enhance children's health and well-being through their first five years. Focusing on county regions where there are disproportionately high levels of poverty, neighborhood violence, and poor health outcomes, F5AC delivers family support services, promotes high-quality early care and education, and works with various partners in school districts, healthcare, and other community settings to improve outcomes for children.

In 2010, F5AC commissioned Applied Survey Research (ASR) to conduct an assessment of the school readiness levels of new kindergarten students for the third consecutive year. The 2010 assessment took place in eight Alameda County school districts, including both F5AC-targeted regions in which students largely come from low-income, high-need families, as well as a small set of students from higher-income areas of the county as well. The Fall 2010 readiness study investigated three primary questions related to the school readiness levels of entering kindergarten students:

1. How ready for school are the sampled kindergarten students?
2. What family factors and child characteristics are associated with higher levels of school readiness?
3. What is the relationship between participation in F5AC programs and children's school readiness?

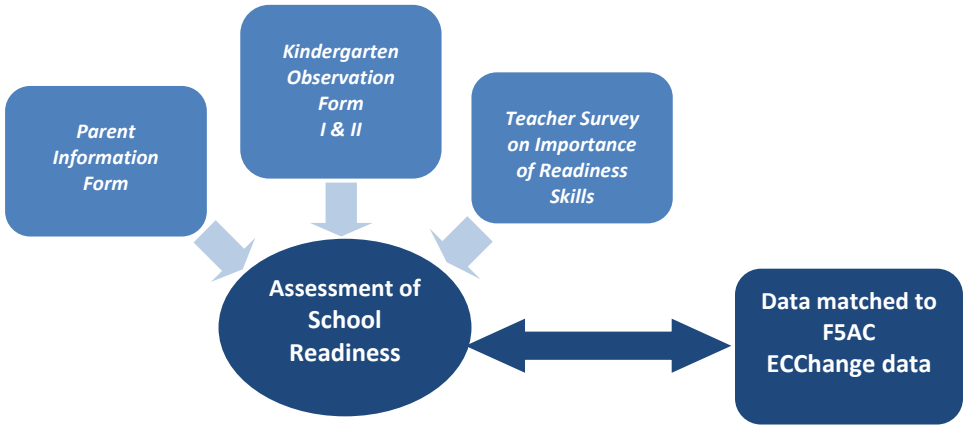
Overview of the Assessment

Ten years ago, ASR created a method and set of validated tools for measuring school readiness that have since been used with approximately 30,000 students in several Bay Area counties, as well as in other parts of California and in other states. In Alameda County, F5AC first contracted with ASR to implement a pilot assessment of school readiness in Fall 2008. Since that time, the school readiness study has nearly tripled in size; in 2010, nearly 1,400 families consented to have their children take part in the study (consent rate = 76%).

Participating kindergarten teachers were trained to serve as expert observers of their students, rating the proficiency of each child in their classroom across 24 readiness skills. Detailed observations of the children were enriched by information gathered on each child's family. Parents of the assessed children completed a survey that provided a window into the family and community factors that are associated with children who arrive ready (and not) for

kindergarten. The response rate for the *Parent Information Form* was very high – 91% of consenting families returned a completed form. In addition, all participating teachers reported their viewpoints on and priorities for readiness via a *Teacher Survey*. ASR drew upon these sources of information – child assessments as measured by the *Kindergarten Observation Form (I and II)*, family information as measured by the *Parent Information Form*, and teacher viewpoints gathered via the *Teacher Survey* – to construct a comprehensive picture of children's readiness for school, as well as the factors associated with higher readiness levels. An additional source of data came from F5AC's ECChange database, which contains records of those who have received F5AC services. Children in the assessment were matched to records in this database in order to examine the association between their readiness levels and their participation in F5AC programs and services.

Figure A. **Sources of Information to Assess the Readiness of Incoming Kindergarten Students**



Findings

Students and Families in the Assessment

Information collected about participants in the Alameda County school readiness assessment reveals a diverse group of students entering kindergarten in 2010:

- Hispanic/Latino students made up the largest share of the sampled students, but there was no race/ethnicity that comprised a majority of the sample.
- Forty-five percent of the students were English Learners.
- Thirty-six percent of students spoke Spanish as their primary language, and four percent spoke Chinese. Small percentages spoke Filipino/Tagalog, Vietnamese, Farsi or Dari, Punjabi or Hindi, or another language as their primary language.
- Thirty-eight percent of students had a mother whose highest level of education was high school or less.

- Some families were struggling financially; 48% indicated that their family income was less than $35,000, 35% were on Medi-Cal, and 11% were receiving insurance through Healthy Families.

- Eight percent of students had been born to a teen mother; 22% were from a single parent household, and one in four had a parent who had lost a job in the past year.

Figure B. **A Portrait of Students in the Study**

Child/ family characteristic	Percent of students
Ethnicity	
Hispanic/Latino	43%
Caucasian	26%
African American	10%
Asian	8%
Pacific Islander	2%
Alaskan Native or American Indian	0%
Multi-racial	8%
Other	2%
Percent English Learners	45%
Primary language	
English	53%
Spanish	36%
Chinese/Mandarin/Cantonese	4%
Filipino/ Tagalog	2%
Vietnamese	1%
Farsi or Dari	1%
Punjabi or Hindi	1%
Korean	0%
Other language	4%
Mother has no education post high school	38%
Markers of low income	
Family income is less than $35,000	48%
Receive Medi-Cal	35%
Receive Healthy Families	11%
Child was born to a teen mother	8%
Single parent household	22%
Parent lost job in the last year	25%

Source: Kindergarten Observation Form (2010).

Note: Percentages may not sum to 100% due to rounding. Sample sizes range from 1,167-1,379.

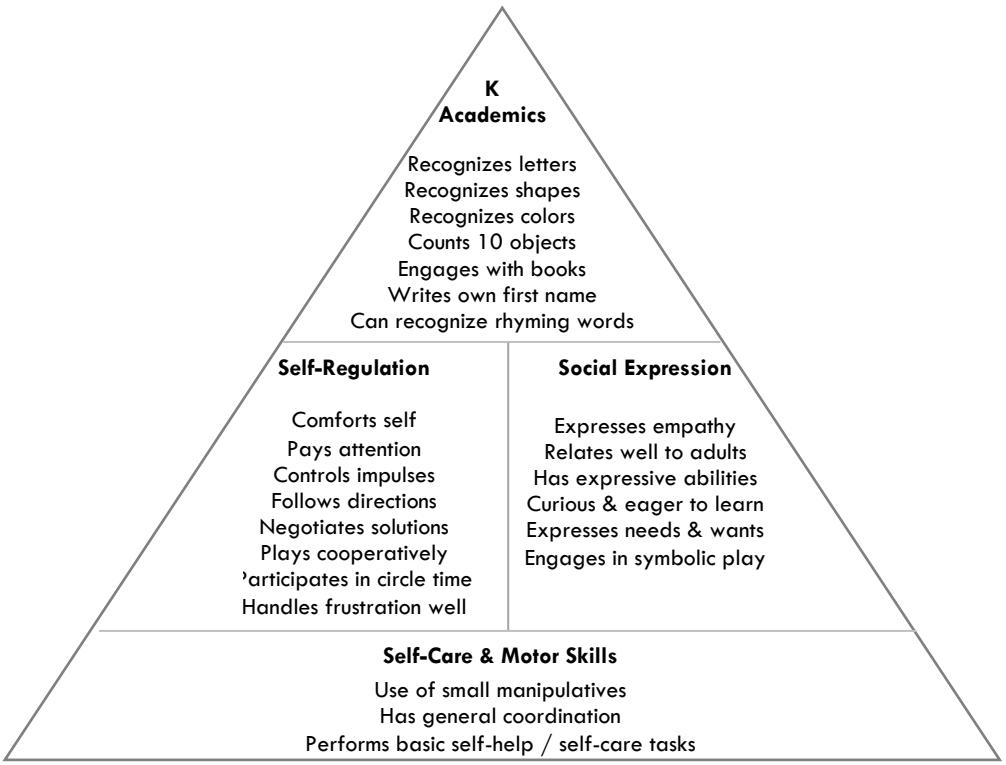
How Ready for School Are the Sampled Kindergarten Students?

There are multiple dimensions of kindergarten readiness. Statistical exploration of children's performance across 24 readiness skills revealed that skills reliably sort into four *Basic Building Blocks* of readiness:

1. *Self-Care & Motor Skills*
2. *Social Expression*
3. *Self-Regulation*
4. *Kindergarten Academics*

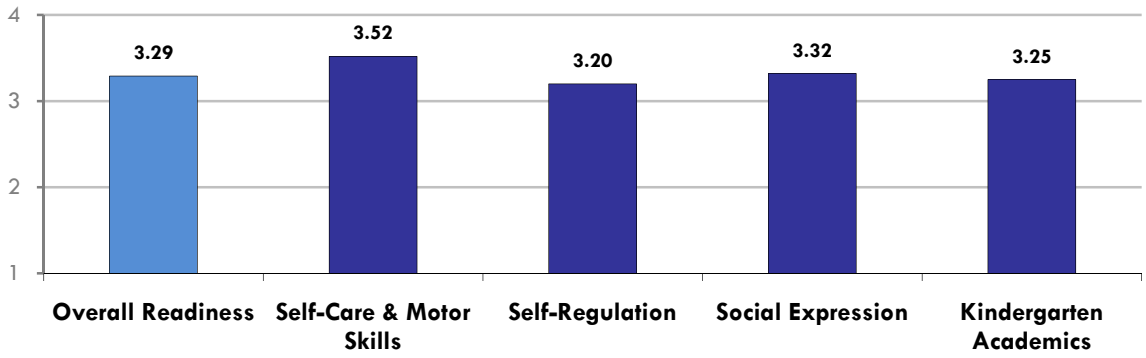
Figure C shows the 24 individual skills on which students were assessed, as well as how the skills sort into the four *Basic Building Blocks*.

Figure C. ***Basic Building Blocks*** **of Readiness**



The chart that follows shows students' readiness levels across the *Basic Building Blocks.* Children tended to score highest on *Self-Care & Motor Skills* (average score = 3.52 out of 4 possible) and to have the greatest room to grow in their *Self-Regulation* skills (average score = 3.20). Across all the readiness skills measured, students' average skill level was 3.29 – well above the "In progress" level.

Figure D. **Students' Proficiency across Four *Basic Building Blocks* of Readiness**

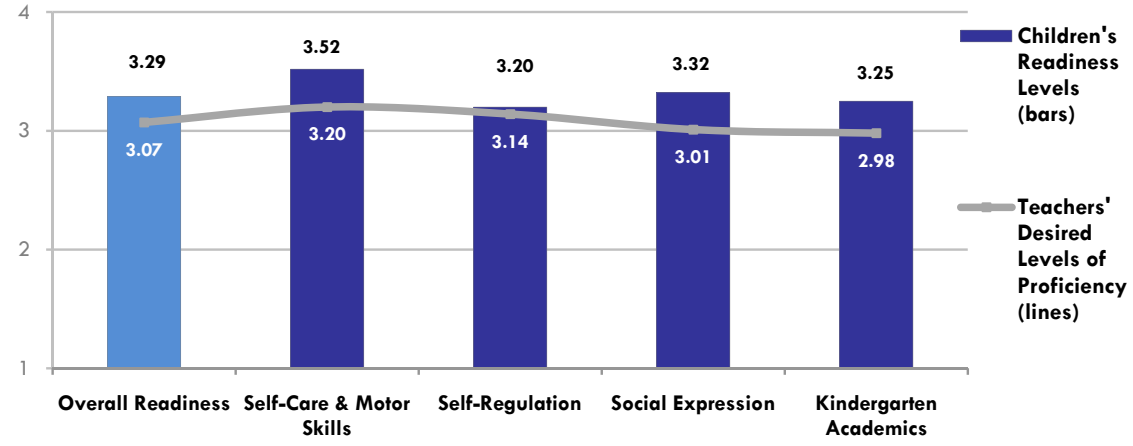


Source: Kindergarten Observation Form I (2010).

Note: Scores are based on 1,383-1,389 students. Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

An important component of the Fall 2010 school readiness assessment in Alameda County involved getting feedback from participating teachers to help contextualize the readiness levels observed in their entering kindergarten students. The following figure maps students' observed skill levels on the *Basic Building Blocks* against their teachers' expectations about the levels of proficiency needed in order to be school-ready; the bars show students' skill levels and the line indicates teachers' expectations. As the figure shows, students' average scores exceeded teachers' average skill expectations across all domains of readiness. The smallest margin between students' scores and teachers' expectations occurred for *Self-Regulation* skills; in this domain, students' average skill levels were only slightly higher than what their teachers believed they should be for a successful transition to kindergarten.

Figure E. **Students' Skill Levels in the Context of Teacher Expectations**



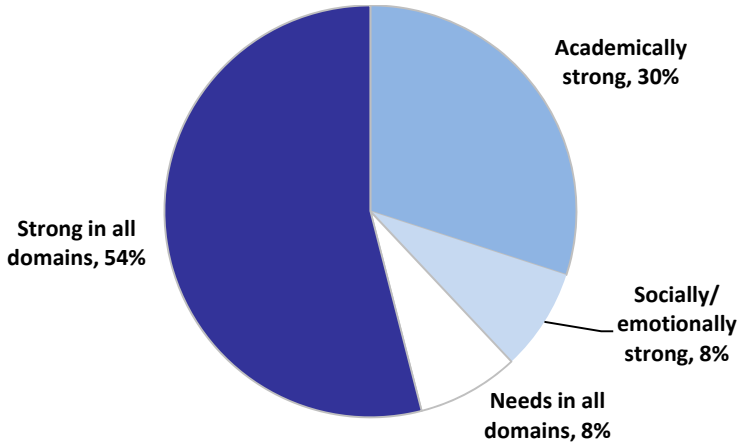
Source: Kindergarten Observation Form I (2010) ; Teacher Survey of the Importance of Readiness Skills (2010).

Note: Scores are based on 1,383-1,389 students and 79 teachers. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

Children exhibited different patterns of readiness strengths and challenges as well. For a more detailed look at their different patterns of readiness, children were sorted into one of four *Readiness Portraits – Strong in all domains, Socially/emotionally strong, Academically strong,* and *Needs in all domains* students – based on their pattern of proficiency across the readiness skills.[1]

- More than half (54%) of students entered kindergarten classrooms as *Strong in all domains* – at or near proficiency across the board in all four *Basic Building Blocks* of readiness. These children were well-prepared to succeed in school.
- Eight percent of students demonstrated readiness needs across all four of the readiness dimensions. These children sorted into the *Needs in all domains* group – those who were not yet or just beginning to develop the skills they need to be successful in kindergarten.
- The remaining children exhibited mixed patterns of readiness. *Socially/emotionally strong* (8% of students) were well-equipped on the social-emotional dimensions of readiness, but they had needs in the realm of *Kindergarten Academics* – learning their letters, numbers, shapes, and colors.
- In contrast, nearly one third of students (30%) sorted into the *Academically strong* group. These students were doing well in their early academics; however, they demonstrated greater challenges in the social-emotional areas of readiness (skills within the *Self-Regulation* and *Social Expression* dimensions).

Figure F. **The Prevalence of Each Readiness Portrait**



Source: Kindergarten Observation Form I (2010).

Note: This chart is based on 1,379 students.

Students who were *Strong in all domains* tended to be older than their peers, they were less likely to be English Learners, and most had attended preschool. They were more likely than their peers to come from families with higher income and education levels, and their parents reported greater engagement and support than parents of students in other *Readiness Portraits*.

[1] Children were sorted into one of the four *Readiness Portraits* via a data-driven technique called cluster analysis.

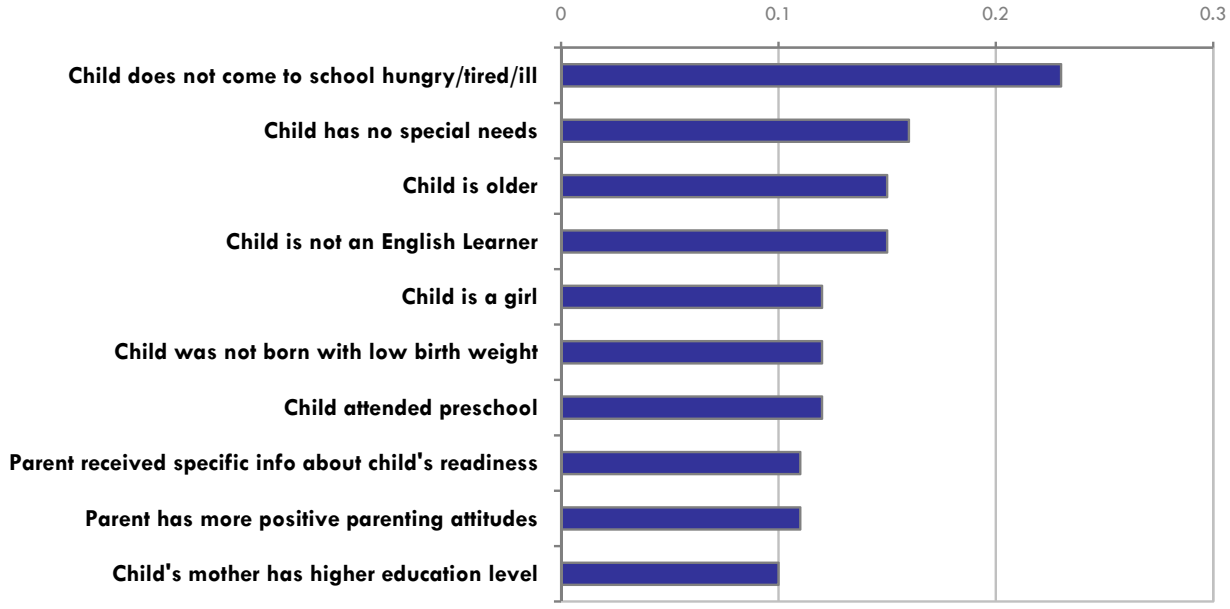
What Family Factors and Child Characteristics Are Associated with Higher Levels of School Readiness?

A set of analyses was conducted to examine what factors were associated with greater school readiness. These analyses take into account all important measured variables simultaneously, so that the relationship between readiness and particular family, student, and school-level factors could be examined after "ironing out" the influence of other, related factors.

The strongest predictor of readiness was students' basic well-being. Although there were few children who were frequently seen by teachers as being hungry, tired, or ill, students with these issues had readiness levels that were significantly lower than those of their peers. In addition, students who had no special needs, were older, were not English Learners, were girls, were not born with a low birth weight, and came from families with higher education levels entered school more ready than their peers without these characteristics.

Some significant predictors of readiness suggest fruitful avenues for future community intervention. Preschool experience was associated with enhanced readiness (although analyses suggest this may not extend to *Self-Regulation* development in this sample), as was having a parent who received specific information about how ready their child was for school. Children of parents who had more positive parenting attitudes were also more ready for school, although analyses looking more specifically at each readiness domain revealed that this association was found only in the social and emotional readiness domains.

Figure G. **Relative Strength of Factors Significantly Associated with Overall School Readiness**



Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Values for each factor listed above represent standardized beta coefficients that were significant at $p < .05$. For a full listing of all variables entered into the model, see text of full report. The overall regression model was significant, $F = 21.46$, $p < .001$, explaining 33% of the variance in kindergarten readiness ($R^2 = .34$; Adj. $R^2 = .33$).

What Is the Relationship between Participation in F5AC Programs and Children's School Readiness?

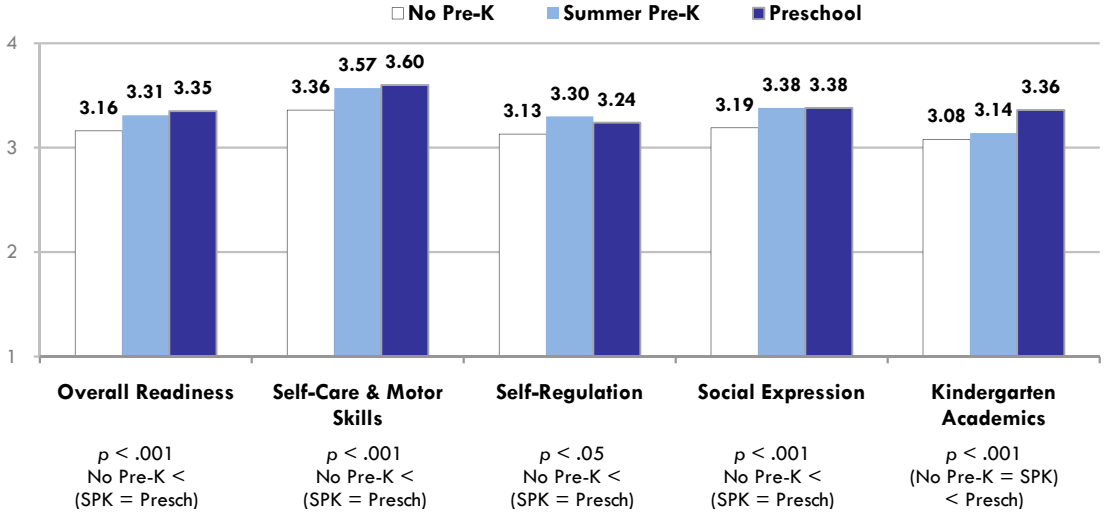
Comparisons of those who had and had not received F5AC services showed that F5AC recipients were a particularly high-need group. Compared to non-recipients, those who received F5AC services were more likely to have been from families that included teen mothers and single parents, had lower incomes and education levels, engaged in fewer family activities, used less community resources such as parks and libraries, and felt they had less social support for their parenting needs.

Analyses comparing F5AC program recipients and non-recipients did not reveal readiness benefits associated with participation in some programs, including Post-Partum Visits, Pediatric Development Screening Support, and Preschool with Mental Health Consultation. However, students whose families received services through Intensive Family Support Case Management had marginally higher levels of readiness than non-participants, particularly in the areas of *Self-Regulation* and *Social Expression*.

Promising readiness trends were found for the Summer Pre-Kindergarten program as well. The readiness levels of three groups of students were compared: (1) those who had no preschool or pre-k educational experience; (2) those who had F5AC SPK experience; and (3) those who had attended a licensed preschool or child care center (e.g., Head Start, State Preschool or private program). After controlling for differences among the students, results revealed that:

- Summer Pre-K students were more ready for school than children with no preschool experience in all areas except *Kindergarten Academics*, in which there was a trend for enhanced readiness in SPK students that did not reach statistical significance.
- The adjusted readiness scores of the SPK students were similar to those of students with a full preschool experience in all domains but *Kindergarten Academics.* In this skill area, preschooled students maintained a significant advantage.

Figure H. **Students' Readiness as a Function of Pre-K Experience – Adjusted Means**



Source: Kindergarten Observation Form I (2010).

Note: Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2=just beginning, 3=in progress, 4=proficient. Scores based on 422-425 "No Pre-K" students, 86-87 "Summer Pre-K" students, and 789-791 "Preschool" students. Differences in mea scores are indicated above, according to analyses of covariance, with control variables noted in regression section, as well as basi demographic and SES variables: Maternal education, income, sex, age, and EL status. Post-hoc tests revealed marginal or significan group differences as indicated above.

Implications

Data from this year's readiness study – as well as the broader set of findings from three years of readiness measurement in Alameda County – suggest several possible directions for community action as well as some strong trends across three years of data collection.

Conclusions and Recommendations from the 2010 Findings

Development of *Self-Regulation* skills should be an ongoing priority for supporting children during their first five years. Given consistent findings about needs in the domain of *Self-Regulation* skills, emphasis should be placed on creating environments in the home and in early education that promote children's development of skills relating to impulse control and regulating their emotions and behavior. Some research-based strategies for fostering self-regulation include: encouraging parent engagement and warm/responsive parenting practices; facilitating many opportunities for pretend play during which children tend to explore feelings and practice social/behavioral norms; using children's books as a way to discuss different ways of handling emotions; and giving children frequent opportunities to make choices/think ahead/plan activities/consider solutions to social problems during their daily lives (Berk, Mann, & Ogan, 2006; Boyd, Barnett, Bodrova, Leong, & Gomby, 2005; Greengrass, 2010).

Community interventions should target the factors that are most strongly associated with enhanced readiness levels. The results of the regression analyses examining significant readiness predictors suggest several opportunities for potentially impactful community interventions, including:

- *Promoting high-quality preschool experiences:* Although many children had attended preschool in this study, a significant number had not. Districts and community partners should continue to look for new opportunities to provide students with high-quality preschool experiences and to target children and families who are currently unrepresented among the ranks of preschoolers.

- *Providing information to parents to help them work on their children's readiness*: Children whose parents had engaged in more transition activities (e.g., visiting the elementary school with the child prior to the start of school, working on school skills at home, attending parent meetings and orientations, etc.) were more likely to enter kindergarten *Strong in all Domains* of readiness. In addition, the more families engaged with children to read together, play games, do chores together, etc., the more likely their children were to be prepared across readiness domains. Local interventions can use these findings to help let families learn about the many small ways that they can and do help prepare their children for school every day.

- *Providing support for families to ensure basic needs are met and that parents are supported in creating a home environment that helps their child thrive*: Child health and well-being was the greatest predictor of readiness in this study. Families need support to ensure that children's basic needs for adequate food, sleep, and good health are always met. In this project, when parents felt more supported in their parenting roles and had more positive attitudes about parenting, their children tended to have better readiness outcomes. First 5 Alameda County program recipients appeared to be a

particularly high-need population. Program participants had more life stressors and less parenting support than non-participants. These families were also less likely to be using community resources or to be engaging in family activities or transition activities. Knowledge of these needs can help F5AC target and renew efforts to support and educate families in these areas.

- *Enhance communication between ECE and elementary settings to support families and address local readiness needs:* Opening lines of communication between preschool and kindergarten teachers and other education professionals may be one effective strategy for enhancing support to families and addressing local needs around school readiness. The Kindergarten/Early Care and Education (K/ECE) Collaborative model in Alameda County provides an example of one such forum. The K/ECE program model is described in more depth in Part 8 of the comprehensive report.

For children without a longer-term preschool experience, F5AC's Summer Pre-K program is strongly recommended. In addition to the improved readiness outcomes that were identified among children whose families participated in F5AC's Intensive Family Support Case Management, significant gains in readiness were found for children who participated in F5AC's Summer Pre-Kindergarten (SPK) program. Students who attend the short-term summer program offered by F5AC begin school with stronger readiness levels than children who have no pre-k experience.

Three Years of Readiness Assessment in Alameda County: What Have We Learned?

***Self-Regulation* skills are challenging for teachers and students alike.** In three years of assessments, across different districts and county regions and with different profiles of participating kindergarteners, teachers have consistently noted that skills related to *Self-Regulation* are very important for a successful kindergarten entry, yet they find these skills to be both difficult to change and quite time-consuming to address in their classrooms. Yet, along with *Kindergarten Academics* skills (which teachers see as being least important to have at kindergarten entry) these are the skills in which children are consistently the least proficient when they start school.

Children's basic well-being plays a major role in readiness. In 2008, 2009, and 2010, children's well-being (not being tired, hungry, or ill) was the strongest predictor of their readiness levels – including overall readiness and each one of the four *Basic Building Blocks*. Importantly, this measure is not a proxy for poverty. Students from every income level were included among the group of students with concerns. Preliminary trends over the past two years of readiness data suggest that children who have these well-being concerns appear to come from families that have some markers of difficult family stressors.

Preschool and F5AC Summer Pre-K are both strongly associated with higher readiness levels (but they arrive at those levels differently). Examinations of which skills tend to be most associated with these experiences reveal some different trends for the two types of pre-k experiences. Preschool may have its biggest impact in teaching *Kindergarten Academics*, whereas its associations with other readiness domains – particularly *Self-Regulation* – are more tenuous. For the F5AC SPK program, data across three years suggest the opposite trend; these students tend to be more ready for school relative to non-preschooled peers due to gains in social and emotional domains, more than in *Kindergarten Academics*.

Introduction

School Readiness: What Is It?

In recent years, the issue of children's readiness for school has received increasing attention from policymakers, professionals, researchers, the media, and caregivers. In one of the early large-scale efforts to establish a common framework for addressing school readiness issues, in 1995 the *National Education Goals Panel* (*NEGP*) defined school readiness as involving three critical components: (1) readiness of children for the social and academic institution of school; (2) readiness of families and communities to prepare children for school; and (3) readiness of schools to meet the diverse needs of incoming students and their families. With respect to the first component – children's readiness for school – the *NEGP* conceptualized five dimensions of development and skills that are critical to a child's readiness for school: *Physical Well-Being & Motor Development, Social & Emotional Development, Approaches Toward Learning, Communication and Language Usage,* and *Cognition & General Knowledge.* In different communities throughout the country, these *NEGP* dimensions of readiness have become the foundation for the development of school readiness measurement tools attempting to quantify children's school readiness.

NATIONAL EDUCATION GOALS PANEL
Definition of School Readiness:

- **Readiness of children** for the social and academic institution of school
  - Physical Well-Being & Motor Development
  - Social & Emotional Development
  - Approaches Toward Learning
  - Communication & Language Usage
  - Cognition & General Knowledge
- **Readiness of families and communities** to prepare children for school
- **Readiness of schools** to meet the diverse needs of incoming students and their families

In recent years, a great deal of local and national research has been dedicated to studying how ready children are for school when they begin kindergarten, documenting the levels of proficiency that children demonstrate across a broad spectrum of school readiness skills, along with the factors that are associated with greater (or lesser) readiness levels. Currently, a variety of school readiness measurement tools and methods are being used in different regions throughout the country, providing information to various stakeholders in both the early education and K-12 system about children's strengths and needs as they enter kindergarten and begin their school careers.

Why Does School Readiness Matter?

Why should we study children's readiness for school? A growing body of research has been devoted to answering questions about if and how readiness impacts later school success. A number of studies looking at the relationship between readiness and later achievement have demonstrated that children's social and cognitive readiness for school acts as a "springboard" for later success in school. The five dimensions of readiness defined by the *NEGP* have all been found to contribute to a child's success in school (Kagan, Moore, & Bredekamp, 1995). In particular, children who have competence across these five dimensions are more likely to succeed academically in first grade than are those who are competent in only one or two

dimensions (Hair, Halle, Terry-Humen, & Calkins, 2003). A number of other studies have also found linkages between early school readiness and 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).

- Number competency skills at kindergarten entry predicts both growth rates between first and third grade math and math performance level in third grade achievement (Jordan, Kaplan, Ramineni, & Locuniak, 2009).

- 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).

- 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).

- *Approaches to Learning* at kindergarten entry, which includes constructs such as persistence, emotion regulation, and attentiveness, was found to predict reading and math performance up through fifth grade (Li-Grining, Votruba-Drzal, & Maldonado-Carreno, & Haas, 2010).

- Students who 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 (Cannon & Karoly, 2007).

- Both academic and nonacademic school readiness skills at entry to kindergarten were found to be significantly related to eventual reading and mathematics achievement in fifth grade (Le, Kirby, Barney, Setodji, & Gershwin, 2006).

Perhaps one of the most comprehensive examinations of the impact of school readiness comes from 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, however, some measures of socio-emotional behaviors (internalizing and externalizing problems and social/interpersonal skills) were generally not significant predictors of later academic performance. (Duncan, Claessens, Huston, Pagani, Engel, Sexton, Dowsett, Magnuson, Klebanov, Feinstein, Brooks-Gunn, Duckworth & Japel, 2007).

More recently, the journal *Pediatrics* published an article arguing that early academic preparedness is crucial for outcomes even broader than those in the domain of education. Specifically, with a host of references supporting their position, the authors of this article asserted that "cognitive development and education are arguably fundamental determinants of health" (Fiscella & Kitzman, 2009, p. 1073). They cited as support research showing associations between education and outcomes such as chronic disease rates, disability, engagement in risk behaviors, and later socioeconomic factors that in turn influence health status. From these and other national-levels studies – along with local research conducted with Bay Area students and

described in the following section – there is clear indication that school readiness matters. There is somewhat less agreement on exactly which readiness skills matter most, and how broad and long-lasting their potential impact on the future of young students may be.

History of the Bay Area School Readiness Assessments

Development of a Local School Readiness Measure

In 2000, stakeholders in San Mateo County helped to develop and implement the first large-scale kindergarten school readiness assessment in the Bay Area. Applied Survey Research (ASR) was contracted to develop the research materials and protocol and conduct the assessment. ASR launched a comprehensive process to arrive at a set of tools that had local relevance as well as a foundation in the wider body of early education and K-12 literature.

With input from a variety of subject matter experts – including community stakeholders, child development and education experts, preschool teachers, and kindergarten teachers – ASR developed and pilot-tested a 19-item *Kindergarten Observation Form* (KOF) to measure children's school readiness skills. After this pilot test, modifications were made to refine the tool, education experts again weighed in, and a more advanced skill representing phonemic awareness was added (i.e., recognition of rhyming words), resulting in a 20-item tool in which skills were organized according to the five *NEGP*-designated categories of school readiness.

Since that initial assessment, school readiness assessments have been conducted in San Mateo County (2002, 2003, 2005, 2008), Santa Clara County (2004, 2005, 2006, 2008), Lake County, Illinois (2005, 2006), San Francisco County, (2007, 2009), Santa Cruz County (2008), in Los Angeles Unified Preschool (2008, 2009), and in Alameda County (2008, 2009, and now 2010). During this time, the ASR School Readiness Assessment Model's tools and methods have been continually refined and enhanced. For example, in 2004, a *Parent Information Form* was added to measure family factors that may play a role in enhancing readiness, and four additional skills have been added to the *Kindergarten Observation Form* to measure social-emotional dimensions of readiness that had not been previously captured.

Shifting from *NEGP* to the *Basic Building Blocks* of Readiness

For several years, the set of skills measured by the *KOF* was organized and reported according to the five categories established by the *NEGP*, as described above. In 2005, ASR took another look at the readiness data to determine whether the pattern of results observed in the data supported the NEGP categories as most appropriate "sorting" of the readiness skills. Using an approach called factor analysis, ASR examined the readiness data that had been collected that year to see if the observed patterns of children's skill proficiency sorted according to *NEGP* categories, or if perhaps the pattern suggested a different set of readiness categories.

Results of the factor analysis showed that the readiness skills actually tended to group into four primary dimensions of readiness that differed from the *NEGP* categories. Those four dimensions were labeled the *Basic Building Blocks* of readiness, and each contained between three and seven items. They are described as follows:

- *Self-Care & Motor Skills* include those skills needed for taking care of one's basic needs or skills showing fine/gross motor coordination.

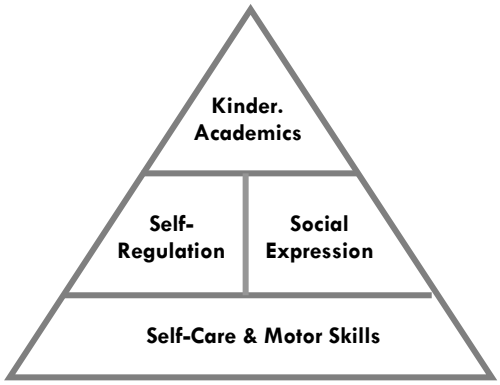
- *Self-Regulation* skills include basic emotion regulation and self-control skills that are needed to be able to perform well in the classroom.

- *Social Expression* skills include measures related to interacting with others and engagement with play and learning.

- *Kindergarten Academics* skills represent the "nuts and bolts" skills that are more academic in nature and tend to be explicitly taught to children at home, in early care settings, and in kindergarten.

Each readiness assessment ASR has conducted since 2005 has supported these four basic components of readiness – even with the addition of four new readiness skills since the original factor analysis was conducted. Feedback from teachers and early education experts and stakeholders has indicated that these categories have intuitive appeal as well – people quickly understand what is meant by these four skill groups, and they see children's skills sorting along these lines. Thus, in line with this compelling support for the *Basic Building Blocks* of readiness, recent school readiness assessments (including the current report) have focused on this sorting of the skills. [2]

Figure 1. **Basic Building Blocks of Readiness**



Local Longitudinal Readiness Research with the *KOF*

In 2010, ASR followed up a preliminary, small-scale study (ASR, 2008) of long-term associations between readiness (as measured on the *KOF*) and later academic outcomes (third grade California Standards Test [CST] scores), using a large sample of kindergarten students from 2004 and 2005 in Santa Clara and San Mateo counties (ASR, 2010). The results of this study were consistent with the findings of the national research literature and supported the KOF as a readiness measurement tool with the capacity to strongly predict academic outcomes three and a half years after children are assessed on it.

[2] The report section "School Readiness in Alameda County – 2010" includes more information on the "crosswalking" of *Kindergarten Observation Form* skill items from the *NEGP* categories to the *Basic Building Blocks*.

In short, this study found that the *Kindergarten Academics* and *Self-Regulation* skills that students possessed at the start of school strongly predicted their performance on English-Language Arts (ELA) and Mathematics CSTs three and a half years later. Results showed that students who had a combination of strong skills in both *Kindergarten Academics* and *Self-Regulation* were particularly likely to perform well on their third grade tests. Students who began school with strong skills in both of these were almost three times more likely to be "Proficient" or "Advanced" on their English-Language Arts CSTs than students who had poor skills in these areas, and they were almost twice as likely to be "Proficient" or "Advanced" on their Math CSTs.

Assessing School Readiness in Alameda County

A similar longitudinal study examining how readiness and third grade outcomes are related in Alameda County is still one year away; Alameda County's first measurement of kindergarten readiness using the KOF began in Fall 2008, when F5AC contracted with ASR to conduct a pilot readiness assessment in three county school districts. These districts were of particular interest to F5AC because they included a relatively high proportion of schools with low Academic Performance Index (API) scores (i.e., schools with a statewide rank of 1, 2, or 3), and a number of F5AC programs and services had been targeted to families in these regions. Indeed, data gathered from that assessment showed that many of the students in the study came from low-income, at-risk family backgrounds. Some children had extensive pre-k educational experiences, but many did not. And, as a whole, the students were an incredibly diverse group in terms of their ethnic and linguistic backgrounds.

For its second readiness study in Fall 2009, F5AC continued with this targeted focus on high-need county regions, adding students from two additional districts to those from the original three districts sampled in 2008. Once again, the students in the study came from county regions in which F5AC supports and programs were most strongly focused.

In Fall 2010, F5AC commissioned its third consecutive study of the readiness levels of entering kindergarten students in Alameda County. Compared to the studies in the previous two years, the 2010 study considerably expanded the pool of potential participants. The 2010 included students from eight school districts in the county, and for the first time, students from higher-performing schools were included in the sample as well. Despite this broadening of the sample of kindergartens included in the study, the key research questions examined are consistent with the 2008 and 2009 studies and include the following:

- How ready for school are the sampled kindergarten students?
- What family factors and child characteristics are associated with higher levels of school readiness?
- What is the relationship between participation in F5AC programs and children's school readiness?

Answers to these questions – as well as detailed information on the children, families, teachers, and classrooms that make up the sample targeted for this study – are described in detail in the following sections of this report.

Methodology

Section Overview

In this section, the four data collection instruments that comprise the ASR School Readiness Assessment Model are described. Next, the procedures for implementing the Fall 2010 study are explained, including recruitment and training of teachers and data collection processes and timelines. The study completion metrics are provided, and information is included on the preparation, analysis, and interpretation of the data described in this report.

Data Collection Instruments and Administration

Four key instruments were used in this assessment. Three forms were completed by teachers: *Kindergarten Observation Form I*, *Kindergarten Observation Form II* and *Teacher Survey on Importance of Readiness Skills*. Parents provided information about their child and family circumstances on the *Parent Information Form*. The figure that follows provides a summary of each of the tool names, their content, and who completed each one.

Figure 2. **Overview of Data Collection Instruments**

Instrument	What Key Data Are Assessed?	Who Completes It?
Kindergarten Observation Form I (KOF I)	24 school readiness skills of children in selected classrooms	Participating kindergarten teachers. Includes teachers from the following districts: Berkeley Unified, Castro Valley Unified, Emery Unified, Hayward Unified, Livermore Valley Joint Unified, Oakland Unified, Pleasanton Unified, and San Lorenzo Unified
Kindergarten Observation Form II (KOF II)	Enjoyment of school, quality of the school transition, participation and anxiety at school of children in selected classrooms	Participating kindergarten teachers
Parent Information Form (PIF)	Pre-K childcare; kindergarten transition activities; activities and routines in the home; parental supports, attitudes, and stressors; demographic and SES variables	Consenting parents of children in the assessment
Teacher Survey on Importance of Readiness Skills	Expected levels of children's proficiency on skills required for successful transition to kindergarten	Participating kindergarten teachers

Kindergarten Observation Form I (KOF I)

The *Kindergarten Observation Form* was originally developed in 2001 using guidelines from the *National Education Goals Panel* (*NEGP*) framework of readiness. Readiness items reflected a range of skills, from minimum competencies, such as *Performs basic self-help/self-care tasks*, to higher-level competencies that help provide a baseline for teachers at the beginning of the year, such as *Recognizes rhyming words*. In 2006 and 2007, four additional readiness skills were added to the core 20 items in order to better capture children's skills at negotiation, coping,

empathy, and handling frustration. Currently, *Kindergarten Observation Form I* assesses children across 24 readiness skills (See Appendix 1).

The *Kindergarten Observation Form I* uses teacher observation as the method of assessment. Given the research setting, this is the most appropriate, valid, and reliable method of assessment for the following reasons:

- Because student behavior can change from day to day, teachers are in a better position than outside observers to assess their students, as teachers can draw on the knowledge gained through four weeks of daily interactions.

- Teacher observation is less obtrusive and less intimidating for students than assessment by outside observers.

- Teachers are entrusted by the school system to be children's "assessors" in other respects, such as grading, and, therefore, it is presumed that they are aware of the need for assessments to be carried out in a fair manner.

The caveat of teacher observations is that there is some risk of natural variability between teacher observers. To minimize variability, the assessment tool includes measurable indicators (items), clear assessment instructions, a clearly defined response scale, a comprehensive scoring guide describing appropriate proficiency levels for each of the 24 readiness skills, and a thorough teacher training (see "Implementation" section for details on the trainings conducted).

Teachers are asked to observe and score each child according to his or her level of proficiency in each skill, using the following response options: *Not Yet* (1), *Beginning* (2), *In Progress* (3), and *Proficient* (4). An option of *Don't Know / Not Observed* is provided as well.

Teachers are able to complete most of the items on the *KOF I* through simple, passive observation of the children in their classrooms. A few items, however, do require one-on-one, teacher-child interaction. Additionally, teachers use passive response rather than on-demand testing techniques on several items in order to reduce anxiety for students during assessments, thereby enhancing the reliability and validity of skill assessment. If teachers feel they cannot provide an accurate assessment on several language-dependent items on the KOF, they are instructed not to assess students on these items and instead check *Don't Know / Not Observed* or leave those items blank.

The *Kindergarten Observation Form I* also includes fields to capture students' basic demographic information to understand who took part in the study and to examine what characteristics are associated with children's skill development (e.g., experience in curriculum-based early education settings, child age, child gender, child's presence of special needs).

In all investigations conducted to date, the *KOF I* has consistently demonstrated strong validity and reliability, including:

- **Strong construct validity:** Correlations with comparable items on *Kindergarten Progress Report* were > .70 on 15 of the original KOF items, with correlations between .46-.67 on the remaining items. Robust correlations have been observed

with *Work Sampling System* (overall *r* = .76) and *Brigance K – 1 Screen II* (overall *r* = .57; *Kindergarten Academics r* = .74).

- **Consistently demonstrated known-groups validity**: The KOF consistently discriminates between groups that are known to vary in their readiness levels, including: older versus younger students, students with and without preschool experience, and students with and without special needs.
- **High levels of internal consistency**: Across KOF administrations, the four readiness factors – *Self-Care & Motor Skills, Self-Regulation, Social Expression,* and *Kindergarten Academics* – have consistently strong Cronbach's alphas.
- **Indications of moderate-to-strong inter-rater reliability:** Analysis of a recent inter-rater reliability study is in progress – preliminary data suggest moderate-to-strong agreement between paired teacher raters in pre-K settings.
- **Predictive validity:** Skills that fall into two readiness domains represented on the *KOF* (*Kindergarten Academics* and *Self-Regulation* skills, described more fully in later sections of this report) are strong predictors of performance on third grade Mathematics and English-Language Arts California Standards Tests (ASR, 2010).

Kindergarten Observation Form II (KOF II)

To gather a clearer picture of children's actual adjustment to the kindergarten classroom, teachers are also asked to complete the *Kindergarten Observation Form II* (see Appendix 2) after all of their *KOF I* assessments have been completed. *KOF II* asks teachers to rate: (1) the smoothness of children's transitions into kindergarten, (2) children's anxiety levels at school, (3) children's participation in class discussion, and (4) children's enjoyment of school. Each rating is made on a four-point scale (e.g. not smooth, somewhat smooth, smooth, very smooth).

Parent Information Form (PIF)

To better understand how family factors are related to children's levels of readiness, a *Parent Information Form* (see Appendix 3) was first developed in 2004 for completion by parents. The *Parent Information Form* collects a wide variety of information, including: types of child care arrangements for children during the year before kindergarten entry; ways in which families and children prepared for the transition to kindergarten; parent beliefs about their role in education; engagement in family activities and daily routines; use of parenting supports and family resources; parenting social support, attitudes, and stressors; health and health care measures; and several demographic and socioeconomic measures. Care is taken to ensure that the questions could be read at a sixth grade reading level. Versions of the form are offered in English, Spanish, Tagalog, Chinese and Vietnamese. Parents are given a children's book (in their preferred language) as an incentive for their completion of the *PIF*. To enhance their privacy, parents are provided with an envelope in which they seal their completed survey prior to returning them to their child's teacher.

Kindergarten Teacher Survey on Importance of Readiness Skills

After teachers complete all of their student assessments, they complete the *Kindergarten Teacher Survey on Importance of Readiness Skills* (see Appendix 4). On this survey, teachers rate the level of proficiency that they think students need for each of the 24 *KOF I* skills in order to have a successful transition into kindergarten. Kindergarten teachers are also asked to identify

the five readiness skills that they consider most important for a child to possess in order to be school-ready, the five skills that are easiest to affect during the school year, and the five skills on which they spend the most time. In addition, teachers provide some information about their classroom (i.e., whether they teach full or half-day kindergarten, whether they teach in a language other than English) and their own backgrounds. The survey is designed to take no more than 15 minutes to complete.

Implementation

Obtaining Participation Agreement

F5AC contacted district and school administrators in eight school districts – Castro Valley Unified School District, San Lorenzo Unified School District, Berkeley Unified School District, Pleasanton Unified School District, Livermore Valley Joint Unified School District, Oakland Unified School District, Hayward Unified School District, and Emery Unified School District – to take part in the fall readiness assessment. Of these eight districts, five (San Lorenzo, Livermore, Oakland, Hayward, and Emery) had been involved in the Fall 2009 readiness assessment and agreed to continue their participation. The three new districts (Castro Valley, Berkeley, and Pleasanton) were also targeted for inclusion because, like the other districts, they are in regions where at least some F5AC programs and services are offered. Attempts were made to secure as many participating schools and teachers as possible within the initial group selected, and efforts were not intended to secure a sample that was generalizable to the district or county level.

School and district administrators were provided with information about the assessment, including its purpose, what participation would involve on the part of the kindergarten teachers, and the timeline for completion of the study tasks.

Teacher Trainings

ASR prepared the F5AC School Readiness Program Manager to conduct the teacher trainings, which were required for all teachers who volunteered to participate in the study. The Program Manager participated in a Train-the-Trainer session led by ASR that detailed all steps involved in the training process. After the training session, the Program Manager conducted one teacher training independently before meeting again with an ASR staff member to debrief about the training process and observe an ASR-led teacher training. After observation of the ASR-led session, the responsibility for the remaining teacher trainings was transferred over to F5AC.

Early in the start of the Fall 2010 school year, the School Readiness Program Manager conducted in-depth trainings within each school district to orient the participating kindergarten teachers to the data collection forms and process.

As an incentive to encourage teachers to attend the trainings, F5AC gave $20 Lakeshore Learning Materials gift cards to all teachers who attended the orientation session.

Trainings lasted approximately 60 minutes. After hearing a general overview of the project and study purpose, kindergarten teachers were given all project materials, including: (1) written instructions on how to complete the assessment; (2) consent letters for parents that explained the study purpose and asked parents to indicate whether or not their child would participate in the study (English, Spanish, Tagalog, Chinese, and Vietnamese versions were available); (3)

Parent Information Forms in English, Spanish, Tagalog, Chinese, and Vietnamese; (4) *Kindergarten Observation Forms I* and *II* and the accompanying *Scoring Guide*; (5) *Teacher Survey on Importance of Readiness Skills,* (6) a sheet to track teachers' progress during the assessment (e.g., a record of parental consent, children observed and yet to be observed, *PIF*s returned); (6) a return envelope for teachers to post in their classrooms to facilitate the collection of parental consent forms, and (7) an envelope for the return of study materials to F5AC. All of these materials were reviewed with teachers so that they were familiar with both the teacher-completed instruments and the parent-completed instruments.

The focal point of the training was an item-by-item description of the readiness skill information to be collected via the *Kindergarten Observation Form I*. This section of the training helped ensure that different observers used the *KOF I* in a consistent way. During the review of the 24 readiness skills, particular emphasis was placed on clarifying:

- The importance of using the *Kindergarten Observation Form Scoring Guide*. The Scoring Guide provides a rubric for each readiness skill defining the specific behaviors/skills which constitute "Not yet," "Beginning," "In progress," or "Proficient" levels of proficiency. Consistent use of the scoring rubric ensures that teachers are rating children according to the same criterion for each skill (see Appendix 5 for scoring guide).

- The distinction between assessing the recognition of letters of the alphabet, shapes, colors, and rhyming words (the skills assessed in this project) versus assessing the verbal production of letters, shape names, color names, and rhyming words (skills not assessed in this project). Suggestions were provided as to how to capture recognition information (e.g., "Will you please pass me the green crayon?" and "Please point to the triangle.").

- The need for children to be assessed in their primary languages. Teachers unable to communicate fluently enough with children in their preferred or primary languages were instructed to skip a set of flagged language-dependent items.

- The administration of those items that required teacher-child interaction.

All of the teachers' questions were answered during the training sessions; in addition, teachers were encouraged to contact the School Readiness Program Manager or ASR at any time with comments or questions about the project.

Obtaining Parent Consent

At the beginning of the school year, teachers distributed the parent consent letters and *Parent Information Forms* (see Appendix 6 for consent forms). Teachers collected parent consent forms and *Parent Information Forms* (*PIFs* were returned in sealed envelopes for privacy). Consent from a parent was required for a student to be able to participate in the study; if a parent did not consent, teachers did not assess the child. If parents did not return a consent form indicating consent or refusal, teachers were asked to make a reasonable effort to get them to return the form; if parents still did not return a consent form despite these efforts, teachers were instructed to assume that they declined to participate, and thus teachers did not assess those parents' children.

As an incentive to encourage participation by families, F5AC gave every child in each participating classroom a children's book. Teachers completed book order forms to specify the number of books needed in each language spoken by the children in their classrooms. The order form included children's books in English, Spanish, Chinese, Tagalog, Vietnamese, and Korean. In addition to these six languages, teachers could request that children's books be ordered in other languages. F5AC researched all requests and fulfilled the requests whenever possible. On the basis of such requests, books were also provided in Arabic, Farsi, Punjabi, Portuguese, Hebrew, and Gujarati.

Conducting Student Assessments

Teachers were asked to conduct their student assessments approximately three to five weeks after the start of the school year, drawing upon their knowledge and observations of children during the first few weeks of school. The average length of time that elapsed between the start of school and teachers' observations was 31 days – just over four weeks after their classes had started. Completed *Kindergarten Observation Forms I* and *II*, *Parent Information Forms* and *Teacher Surveys on Importance of Readiness Skills* were returned to F5AC, who forwarded materials to ASR. After teacher observers had assessed all of their students and had returned study materials to F5AC, F5AC emailed them a thank you letter and mailed a stipend in appreciation of their participation.

Completion Metrics

Schools and Classrooms

Figure 3 presents a summary of the completion metrics for the study participants. Overall, there were 43 participating schools representing eight different school districts in Alameda County. In some schools, just one kindergarten teacher participated in the readiness study; in other schools, two or more teachers took part. In all, students from 81 classrooms were included in the study. For a more complete description of the characteristics of participating teachers and classrooms, please see Appendix 7.

Parent Consent and Response Rates

Overall, the parental consent rate was 76%, and 91% of parents who agreed to have their child take part also completed and returned a parent survey.

Figure 3. **Completion Metrics – Alameda County School Readiness Assessment**

Data	Completion metrics
Number of participating schools	43
Number of participating classrooms	81
Number of children in these classrooms	1,838
Number of KOFs returned	1,394
Parent consent rate	76%
Number of PIFs returned that were matched to a KOF	1,264
Parent PIF response rate (# PIFs received/# consents)	91%

Data Preparation

Cleaning

Data were entered into the Statistical Package for the Social Sciences (SPSS). Following entry, the data were cleaned, using selected techniques to enhance data integrity. For instance:

- Frequencies were run on all variables to ensure that all responses fell into the appropriate ranges;
- Scores on the readiness items were examined for students with whom teachers indicated they could not communicate. If teachers inappropriately provided ratings for the language-dependent items, those ratings were deleted; and
- Several items on the *Parent Information Form* asked parents to fill in a number (e.g., the number of times they read books each week, the number of times they tell stories or sing songs each week). For these items, outlying values were identified and, when such values would inappropriately skew an average score, the top one percent of the distributions was trimmed.

Missing Values

Sometimes teachers or parents did not provide answers to specific items. None of these missing values were replaced. If a participant did not have data available for some items, their case was excluded only from those analyses in which their data was missing; their information was included in all other analyses for which they had data available. All composite scores were calculated without including missing items.

Matching of Assessment Data and F5AC Database Records

One of the key research questions in this assessment involved looking at the association between readiness levels and receipt of F5AC programs and services. To conduct this analysis, ASR was provided with information from F5AC's databases that allowed for matching of students' data across datasets. Specifically, F5AC provided ASR with a dataset of service recipients that included – only for children who were within the likely age range of the assessment – children's name, date of birth, sex, and mother's first name, along with variables indicating which of five targeted F5AC services they had received. Strong precautions were taken to ensure the security of the data transfer between F5AC and ASR.

Once ASR received these data, matches were sought by looking across the two data sets for matches on date of birth, sex, child initials and mother's first name. Three hundred one of the 1,394 assessed children (22%) were match to the F5AC dataset indicating they had received one or more F5AC services. Once the matching process was completed, all child names were deleted from the F5AC data records.

An Overview of Statistical Analyses Conducted

After data were cleaned, numerous statistical analyses were conducted to answer the research questions, as follows:

- Percentages were calculated and chi-square tests were run to test whether differences in percentages reached statistical significance.

- Average scores were calculated for all continuous measures and scaled items. For example, an average score was generated for each of the readiness items, excluding blank responses or responses of *Don't Know / Not Observed*.

- Composite scores (averages across multiple items) were calculated for each of the four *Basic Building Blocks* dimensions. Reliability analyses were first conducted (using Cronbach's alphas) to ensure that reliability was high before composite scores were calculated. Cronbach's alphas for each *Basic Building Blocks* scales are listed below:

    - *Self-Care & Motor Skills*: Alpha=0.76

    - *Self-Regulation*: Alpha=0.94

    - *Social Expression*: Alpha=0.92

    - *Kindergarten Academics*: Alpha=0.83

- Independent t-tests were used to test whether differences in average scores were statistically significant between two groups.

- One-way analyses of variance were conducted to test whether differences in scores were statistically significant across more than two groups; if significant overall differences were found, post hoc LSD tests were used to determine which groups were significantly different from each other.

- Analyses of covariance were used to test whether differences in average scores across groups were significantly different after controlling for key background variables (e.g., family income, maternal education).

- Regression analyses were conducted to explore the strength of relations between readiness items and various student, family, and teacher characteristics.

- Cluster analysis was used to explore whether children in Alameda County manifested different readiness profiles than have been seen in previous assessments.

Statistical Notation

Throughout this report, ASR uses the following standard abbreviations:

- *N* is used when noting the sample size for a chart or an analysis.
- *P*-values (e.g., $p < .01$) are used to note whether certain analyses are statistically significant. *P*-values that are less than .05 are statistically significant; *p*-values that are between .06 and .10 are marginally significant. All significance tests were two-tailed tests (more conservative) rather than one-tailed tests (less conservative).
- The abbreviation "*ns*" is used to flag analyses that did not reach statistical significance.

A Note about How to Interpret the Data in This Report

Teachers participated in the readiness study voluntarily. This means that the information presented in this report describes only the students and families assessed.[3] As a result, **although the data may hint at the broader picture of readiness county-wide, the findings cannot be extrapolated to any county-level populations.**

For this reason, it is also important that readers not draw conclusions about trends over time across multiple years of Alameda County readiness measurements. The students measured in 2008 are a very different group than those measured in 2010 – in terms of the districts in which they attend school, their socioeconomic and demographic profiles, their readiness levels, and many other factors. An example of the changing make-up of the readiness study participants between 2008 and 2010 can be seen in the figure that follows. The 2008 sample included students from only three districts – mostly from San Lorenzo Unified – and there were no students participating who attended high-performing schools, according to Academic Performance Index (API) measures. By this year's study, however, teachers from eight districts were participating, and the participating kindergarten students and families included a mixture from Low, Middle, and High API schools.

Figure 4. **An Overview of Participation in 2008, 2009, and 2010**

District and School Information	2008	2009	2010
Percentage of sample from each district			
San Lorenzo	81%	56%	19%
Livermore	16%	18%	14%
Oakland	3%	4%	14%
Hayward	0%	17%	21%
Emery	0%	5%	2%
Berkeley	0%	0%	18%
Pleasanton	0%	0%	7%
Castro Valley	0%	0%	5%
Percentage of sample from each API level			
Low API school	48%	57%	39%
Middle API school	52%	43%	34%
High API school	0%	0%	27%

Note: Sample size = 577, 521, and 1,394. Low API is defined as a state rank of 1, 2, or 3; Middle API is state rank of 4, 5, 6, or 7. High API is 8 or above. 2009 state API ranks were used for Fall 2010 as that was the most recent data available at the time of this analysis.

To address these sample differences – and to describe common themes in the data as well as plausible interpretations of differences over time – a section toward the end of this report is included, entitled "Three Years of Readiness Assessment in Alameda County: What Have We Learned?"

[3] There are however, subgroups within the data that have been represented completely, such as Marylin Avenue Elementary students. Please see region-level reports for more specific findings for classrooms within the five districts that participated in the assessment.

Section Summary

In the months leading up to the start of the Fall 2010 school year, district and school administrators in eight targeted school districts – Berkeley, Castro Valley, Emery, Hayward, Livermore Valley Joint, Oakland, Pleasanton, and San Lorenzo Unified School Districts – were approached by F5AC and invited to have schools in their districts take part in an assessment of the school readiness of their students entering kindergarten. Teachers from the participating schools attended a training session very early in the start of the school year – in which they were given information about the purpose of the study, full instructions and a timeline for completion of the study tasks, and copies of the four assessment forms to be completed.

Teachers secured consent from the parents of their students and distributed surveys that parents completed and returned in sealed envelopes. Shortly after obtaining parental consent, but after about four weeks of school (when children were fairly comfortable in their new surroundings, but their skills had not yet grown significantly since kindergarten entry), teachers assessed the proficiency of each of their students across 24 readiness skills and recorded their observations. Upon completion of all the student assessments, teachers next completed a form that measured the smoothness of each child's entry into kindergarten. Finally, teachers completed a survey that asked them about their beliefs about the kinds and levels of skills children need to be well-prepared for school success. Teachers returned all of their forms and received participation stipends from F5AC. Data were processed and analyzed, and F5AC program and service recipient data were merged with the assessment data collected to examine associations between receipt of F5AC services and readiness levels. Completion metrics indicated good consent rates overall, with 76% of parents agreeing to let their child take part in the study. Ninety-one percent of parents who agreed to let their child participate and be assessed by his/her teacher also completed and returned a parent survey.

In reading this report, it is important to keep in mind that the data represent only those children, families, and teachers who participated in the assessment, as the study was not designed to be representative of a larger population.

PART 1

Portrait of Students and Families in the Study

Contents of this Chapter:

This chapter presents a portrait of the students involved in the assessment – their gender, age, ethnicity, preferred language, special needs, physical health and use of health care.

A profile of families is also presented, including a discussion of parental education and income levels, home languages, household composition, family activities and routines, sources of parenting support and stress, and parents' beliefs about their role in their children's educations.

Key Findings:

- *Student Characteristics:*
  - One thousand three hundred and ninety-four kindergarteners were assessed (52% girls; 48% boys)
  - Average age: five years; three months
  - Ethnic/racial backgrounds: 43% Hispanic/Latino; 26% Caucasian/White, 10% African American, eight percent Asian, eight percent Multiracial, and five percent other ethnicities
  - Forty-five percent were English Learners
  - Eight percent of students had identified special needs; four percent had *suspected* special needs
  - Ten percent were born with a low birth weight (a risk factor for delays in readiness)
  - Most students were well-connected to health care resources and 97% had insurance
  - A small percentage of students in the sample (4%) were identified by teachers as coming to school feeling hungry, tired, or ill "on most days" or "just about every day." Greater amounts of family stress were linked to poorer child well-being.
- *Family Characteristics*
  - One thousand two hundred and sixty-four parents/guardians returned *Parent Information Forms*
  - Forty-eight percent of families earned less than $35,000 annually. Money and paying bills were at least somewhat of a concern for 75% of the families and 25% of children had a primary caregiver who had lost his/her job in the past year
  - More than half of parents (52%) reported reading with their children an average of five times a week or more
  - Sixty-nine percent of children were within the AAP-recommended guidelines for daily screen time, spending an average of two hours or less per day in front of a computer or television.
  - The most frequently used local family resources included parks (83% of families) and libraries (70% of families).
  - Although parents reported adequate social support for their parenting needs, more than half indicated that they had some needs for support when they needed to run an errand, take a break, or talk to someone to get advice about parenting
  - Parents generally reported taking an active role in their child's schooling, but responses indicated that some may need more tools and resources to feel that they can make a

Kindergarten Students and Families in the 2010 Readiness Study

Section Overview

Before describing how ready for school children are, it is important to know who is coming into Alameda County's kindergarten classrooms. What are their ethnic backgrounds? How many children start school with identified special needs? What kinds of early education experiences have they had? In what kinds of family environments have they spent their early years? The *Kindergarten Observation Form I* and the *Parent Information Form* gathered information on a number of demographic and socioeconomic characteristics of children and families, as well as measures of what their home and family environments were like. This section describes the students and families who were involved in the readiness assessment.

Students

Basic Demographics

There were more girls than boys in the assessment (52% versus 48% respectively). Children's average age was about five years and three months, with just over one of five children (22%) having not yet reached their fifth birthday. Only two percent of children were six years or older when they began kindergarten.

Figure 5. **Students' Sex and Age Upon Kindergarten Entry**

Demographics	Percent of students
Sex	
Boys	48%
Girls	52%
Age (average age = 5.28 yrs)	
Between 4 1/2 and less than 5	22%
At least 5 and less than 5 1/2	49%
At least 5 1/2 and less than 6	28%
6 and older	2%

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Sample size = 1,392 and 1,378. Percentages may not sum to 100 due to rounding..

Students of Hispanic/Latino backgrounds were the most common race/ethnicity among the assessed children, representing 43% of the students. Caucasian students were the next largest racial group with 26% of students, followed by African American students (10% of the sample). Asian and multi-racial students each made up eight percent of the sample.

Figure 6. **Percent of Kindergarten Students Representing Each Race/Ethnicity**

Race/Ethnicity	Percent
Hispanic/Latino	43%
Caucasian	26%
African American	10%
Asian	8%
Pacific Islander	2%
Alaskan Native or American Indian	0%
Multi-racial	8%
Other	2%

Source: Kindergarten Observation Form I (2010).

Note: Sample size = 1,350. Percentages may not sum to 100 due to rounding.

Language Variables

Information gathered in the assessment suggests that there is great linguistic diversity among kindergarten students; slightly fewer than half of students (45%) were English Learners.

Figure 7. **Students' English Learner Status**

Children's Language Status	Percent
English Learner	45%
Not English Learner	55%

Source: Kindergarten Observation Form I (2010).

Note: Sample size = 1,379.

Just over half of students (53%) spoke English as their primary language, and 36% of students spoke Spanish as their primary language. Chinese was the next most commonly spoken language (4% of students). Reflecting the diversity of Alameda County, small percentages of children spoke Filipino/Tagalog, Vietnamese, Farsi or Dari, or Punjabi or Hindi. Four percent spoke another primary language.

Figure 8. **Students' Primary Languages**

Primary Language	Percent
English	53%
Spanish	36%
Chinese/Mandarin/Cantonese	4%
Filipino/Tagalog	2%
Vietnamese	1%
Farsi or Dari	1%
Punjabi or Hindi	1%
Korean	0%
Other language	4%

Source: Kindergarten Observation Form I (2010).

Note: Sample size = 1,363. Percentages may not sum to 100 due to rounding.

Teachers who were able to speak the primary language of their students were asked to rate each one's progress in his or her primary language. Results are shown in the figure below. Although most children (73%) were believed by their teachers to be "on track" with their use of language, seven percent were rated to be "delayed," and 12% were described as "advanced."

Figure 9. **Teachers' Assessment of Children's Use of Primary Language**

Children's Use of Primary Language	Percent
Delayed	7%
On track	73%
Advanced	12%
Cannot determine	8%

Source: Kindergarten Observation Form I (2010).

Note: Sample size = 1,370. Percentages may not sum to 100 due to rounding.

For those students who spoke a language other than English as their primary language, teachers provided their assessment of students' receptive English skills (their ability to understand English), as well as their expressive language skills (their English-speaking ability). Most of these students were still struggling to acquire both types of English skills, with 83% at the "beginning" or "early intermediate" levels on their receptive skills and 86% at the "beginning" or "early intermediate" levels on their expressive English skills.

Figure 10. **Teachers' Assessment of English Skills of Children Whose Primary Language Is Not English**

Children's English Skills	Beginning	Early intermediate	Intermediate	Early advanced	Advanced
Receptive language skills	57%	26%	12%	4%	1%
Expressive language skills	61%	25%	10%	3%	1%

Source: Kindergarten Observation Form I (2010).

Note: Percentages are based on 616 students. Percentages may not sum to 100 due to rounding.

Physical Health and Well-Being

To better understand the health and well-being of entering kindergarten students, teachers were asked to report how frequently each child indicated (s)he was hungry, appeared tired in class, was sick or ill, was absent, or was tardy. As the figure below shows, the basic physical needs for almost all children are being met. However, on at least some days (and sometimes more often), 12% or more of students had come to school feeling hungry, tired, or sick, or they had been frequently absent or tardy.

Figure 11. **Teacher Reports of Children's Well-Being**

Well-Being Indicator	Rarely or almost never	On some days	On most days	Just about every day
Indicated (s)he was hungry	84%	14%	2%	<1%
Appeared tired in class	81%	16%	2%	1%
Was sick or ill	89%	11%	1%	0%
Was absent	87%	13%	<1%	<1%
Was tardy	85%	12%	2%	1%

Source: Kindergarten Observation Form I (2010).

Note: Percentages are based on 1,387, 1,385, 1387, 1,387 and 1,387 students, respectively.

As later report sections will demonstrate, understanding who the children are who might have well-being concerns is important – specifically those who feel hungry, tired, or ill – as these children tend to enter kindergarten with significantly lower readiness levels than their peers. To further explore the characteristics of students who had potential well-being concerns, students who had been identified by teachers as having one or more issues on the items related to being hungry, tired, or ill "on most days" or "just about every day" were compared to students without any such concerns. A total of 58 students (4% of the sample) had one or more well-being "flags" based on these criteria.

Figure 12 shows how these children differed from their peers. As the figure shows, the largest difference between the two groups of children suggested that these children were coming from households with some level of stress. For example, compared to children without concerns, the children with well-being concerns were more likely to come from single-parent households,

their parents were more likely to have lost a job in the last year, their parents reported more life concerns, and their parents had more frequent negative feelings about parenting.

Figure 12. **Comparing Students With and Without Teacher-Reported Well-Being Concerns**

Child/Family Characteristic	Students with no well-being concerns	Students with one or more well-being concerns
Average age	5.28	5.25
Percent who are girls	53%	43%
Percent with special needs*		
Formally identified	**8%**	**7%**
Suspected, not yet formally identified	**3%**	**14%**
Percent English Learners	45%	36%
Ethnicity		
Hispanic/Latino	43%	36%
Asian	9%	2%
Caucasian	26%	29%
African American	10%	16%
Pacific Islander	2%	2%
Alaskan Native or American Indian	<1%	0%
Multi-racial	8%	14%
Other	2%	2%
Mother has no education post high school	37%	45%
Family income is less than $35,000	47%	54%
Type of insurance		
Private insurance	52%	50%
Medi-Cal	35%	39%
Healthy Families	11%	7%
None	3%	4%
Born to a teen mother	8%	7%
Percent from single parent household**	**21%**	**40%**
Percent whose parent lost job in the last year*	**25%**	**38%**
Frequency of negative feelings about parenting (1 to 4 scale)**	**1.42**	**1.60**
Average level of major life concerns (1 to 3 scale) +	**1.68**	**1.81**

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Percentages may not sum to 100 due to rounding. Sample sizes range from 1142-1334 for children without well-being concerns and 46-58 for children with 1+ well-being concerns. Significant differences according to chi-square tests or t-tests are indicated in bold and as follows: * $p < .05$; ** $p < .01$; *** $p < .001$.

Previous research has shown an association between low birth weight and early school difficulties and grade retention (e.g., Byrd & Weitzman, 1994). For this reason, a question about

low birth weight was included on the *Parent Information Form*. Among the children in the assessment, 10% had been born weighing less than five pounds, eight ounces.

Figure 13. **Percentage of Children with Low Birth Weight**

Birth Weight	Percent
Child weighed less than 5 lbs 8 ounces	10%
Child did not weigh less than 5 lbs 8 ounces	88%
Don't know	2%

Source: Parent Information Form (2010).

Note: Sample size = 1,220. Percentages may not sum to 100 due to rounding.

Health Insurance, Receipt of Health Screenings, and Access to Health Providers

The *Parent Information Form* contained several questions relating to children's access to and use of various health services. Just over half of students (52%) were covered by private insurance. Thirty-five percent were insured by Medi-Cal, and about one in ten (11%) was insured through Healthy Families. Three percent of children in the sample had no health care coverage.

Figure 14. **Sources of Children's Health Insurance**

Types of Insurance	Percent
Private insurance	52%
Medi-Cal	35%
Healthy Families	11%
Child has no health insurance	3%

Source: Parent Information Form (2010).

Note: Sample size = 1,205. Percentages may not sum to 100 due to rounding.

On the *Parent Information Form,* parents were also asked if their child had a regular source of medical care and a dentist. Almost all children (98%) had a regular doctor, pediatric provider, or clinic, and 89% had a regular dentist.

In terms of care received during the last year, 91% of children had been to a dentist, 73% and 75%, respectively, had had hearing and vision exams, and 39% had received a developmental screening.

Figure 15. **Children's Access to and Use of Health Care**

Use of Health Care	Percent
Has a regular doctor, pediatric provider, or clinic	98%
Has a regular dentist	89%
Has had a dental exam in the past year	91%
Has had a hearing exam in the past year	73%
Has had a vision exam in the past year	75%
Has received a developmental screening in the past year	39%

Source: Parent Information Form (2010).

Note: Sample sizes are as follows: 1,235, 1,236, 1,237, 1,263, 1,263, & 1,263.

Special Needs

Information about children's special needs comes from two sources in the assessment: either from teachers (as reported on the *Kindergarten Observation Form I*) or from parent reports on the *Parent Information Form*. According to parents and/or kindergarten teachers, eight percent of children were identified as having special needs identified by a professional at the time they entered school; another four percent were suspected by a parent or teacher to have an as-yet not formally diagnosed special need.

Figure 16. **Presence of Special Needs**

Special Needs Status	Percent
Has special needs	8%
Teacher or parent suspects a special need (not [yet] identified by a professional)	4%
Does not have special needs	89%

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Sample size = 1,385. Percentages may not sum to 100 due to rounding.

Parents and teachers who indicated that a child had a special need were asked to describe that special need and to provide more information about services sought and received. More than half of parents (59%) learned about their child's special need from a pediatrician or other doctor. Twenty-one percent of parents had learned about their child's special need from another professional.

Figure 17. **How Parents Learned of Special Need**

Source of Diagnosis/Assessment of Special Needs	Frequency	Percent
Child's pediatrician or other doctor	33	59%
Another professional	12	21%
Own diagnosis/ assessment	8	14%
Other	3	5%

Source: Kindergarten Observation Form I and Parent Information Form (2010.)

Note: These percentages are based on responses of 56 parents whose child had a special need (according to parent or teacher) and also answered questions about how they learned about it. Please note that sample sizes are small; therefore, findings may not be stable.

The most common special needs mentioned were problems with speech and language, affecting 25% of the children with special needs in the sample.

Figure 18. **Types of Special Needs, as Reported by Parents and Teachers**

Types of Special Needs	Frequency	Percent
Speech and language	19	25%
Vision	13	17%
Asthma and/or allergies	9	12%
Hearing	8	11%
Behavioral/ emotional /psychological	8	11%
Attention deficit and/or hyperactivity disorders	7	9%
Other physical health issues	6	8%
Sensory sensitivity/ sensory processing	4	5%
Autism	3	4%
Down's syndrome	2	3%

Source: Kindergarten Observation Form I and Parent Information Form (2010)

Note: These percentages are based on write-in responses of 75 parents who indicated that a child had a special need and provided a response. Percentages sum to more than 100% because a child could have more than one special need.

Children's special needs were most often diagnosed when children were two years old or younger (32% of children with special needs); however, there was no strong trend in when children's special needs were identified – identification occurred across all age ranges.

Figure 19. **Age at Identification of Special Need**

Age at First Identification	Frequency	Percent
Birth to 2 years old	22	32%
Just over 2 years to 3 years old	16	23%
Just over 3 years to 4 years old	15	22%
Just over 4 years or older	16	23%

Source: Parent Information Form (2010).

Note: These percentages are based on 69 parents whose children have special needs who completed information on the age their child was diagnosed. Percentages may not sum to 100 due to rounding.

Eighty percent of the children with special needs had received professional help to address it; 20% had not received professional help.

Figure 20. **Receipt of Services for Special Needs**

Receipt of Help for Special Need	Frequency	Percent
Child received help for special need	61	80%
Child did not receive help for special need	15	20%

Source: Parent Information Form (2010).

Note: These percentages are based on 76 parents whose children have special needs who completed information on receipt of services.

Families and Households

Because children's school readiness can be impacted by a host of socioeconomic and family characteristics, several questions on the *Parent Information Form* sought to learn more about the children's family contexts. Several key factors relating to children's family circumstances are described in this section.

Maternal Education

Local and national readiness assessments have found strong linkages between maternal education levels and children's school readiness (e.g., Alexander & Entwisle, 1988). To enhance our understanding of whether this factor was also associated with readiness levels among Alameda County kindergarten students, parents were asked to provide information about the child's mother's education level.[4] In the current sample, 13% of mothers had not graduated from high school. Twenty-five percent had completed high school, but had not pursued higher

[4] We recognize and regret that this question can be perceived as exclusionary or overly narrow to those with family structures that are not characterized by one mother and one father; our intention with this question was to allow for comparisons with a broader research literature that uses this variable as a predictor of readiness, and not to exclude or devalue families that have a different structure than this.

education. Another 34% had some college or an AA/AS degree, and 29% completed a bachelor's or advanced degree.

Figure 21. **Highest Level of Education Completed by Child's Mother**

Education	Percent of mothers
Less than 6th grade	2%
6th grade	6%
7th or 8th grade	5%
High school graduate	25%
Some college	25%
Associates degree (AA/AS)	9%
Bachelor's degree (BA/BS)	16%
Advanced degree	13%

Source: Parent Information Form (2010)

Note: Sample size = 1,211. Percentages may not sum to 100 due to rounding.

Family Income

Parents completing the *Parent Information Form* were asked to provide their annual family income. Results revealed that incomes were very low for a fair number of these families; almost half of them (48%) made less than $35,000 per year.

Figure 22. **Yearly Family income**

Income Range	Percent
Less than $15,000	22%
$15,000 - $34,999	26%
$35,000 - $49,999	12%
$50,000 - $74,999	12%
$75,000 - $99,999	8%
$100,000 or more	21%

Source: Parent Information Form (2010)

Note: Sample size = 1,188. Percentages may not sum to 100 due to rounding.

Home Languages

Parents were asked to indicate the language they used most often at home with their child. English (56%) and Spanish (36%) were most commonly cited.

Figure 23. **Language Used Most Often at Home**

Language	Percent
English	56%
Spanish	36%
Chinese/ Mandarin/ Cantonese	4%
Vietnamese	1%
Filipino/ Tagalog	<1%
Hindi/Punjabi	1%
Farsi or Dari	1%
Korean	<1%
Other language	1%

Source: Parent Information Form (2010).

Note: Sample size = 1,098. Percentages may not sum to 100 due to rounding.

About two-thirds of parents (66%) indicated they spoke English very well, whether or not it was their primary language. One in five (20%) reported that they did not speak English very well or at all.

Figure 24. **Parents' Self-Reported Level of English-Speaking Proficiency**

English-speaking Proficiency	Percent
Very well; English is my primary language	48%
Very well, but English is not my first language	18%
Somewhat well; I usually- but not always- can communicate what I want to say in English	13%
Not very well; I know some words in English, but often not enough to communicate what I want to say	15%
Not at all; I know very few or no English words	5%

Source: Parent Information Form (2010)

Note: Sample size = 1,221. Percentages may not sum to 100 due to rounding.

Number of People in Household

Families in the assessment reported an average of 4.55 people living in their household. Eight percent of families in the study had seven or more people living in their household.

Figure 25. **Number of People in Household**

Household Residents	Average	Range
Number of children 0-5 years	1.54	0 - 5
Number of children 6-17 years	0.83	0 - 6
Number of adults 18 yrs and older	2.18	1 -9
Total household residents	4.55	2 - 16

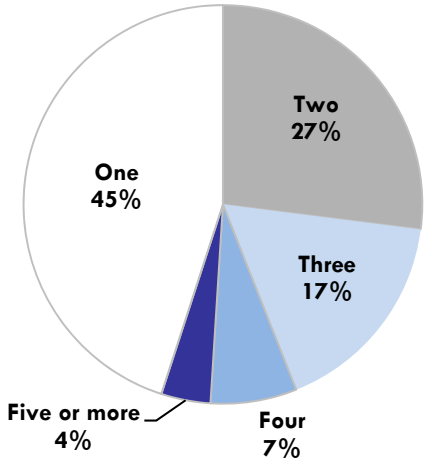
Source: Parent Information Form (2010)

Note: Sample sizes are as follows: 1,216, 1214, 1216, 1216.

Family Mobility

Parents were asked how many addresses they had lived at since the birth of their child. On average, families had lived at two addresses (mean = 2.00), with answers that ranged from one to eleven different addresses. Responses are displayed in the figure that follows.

Figure 26. **Number of Addresses Since Child's Birth**



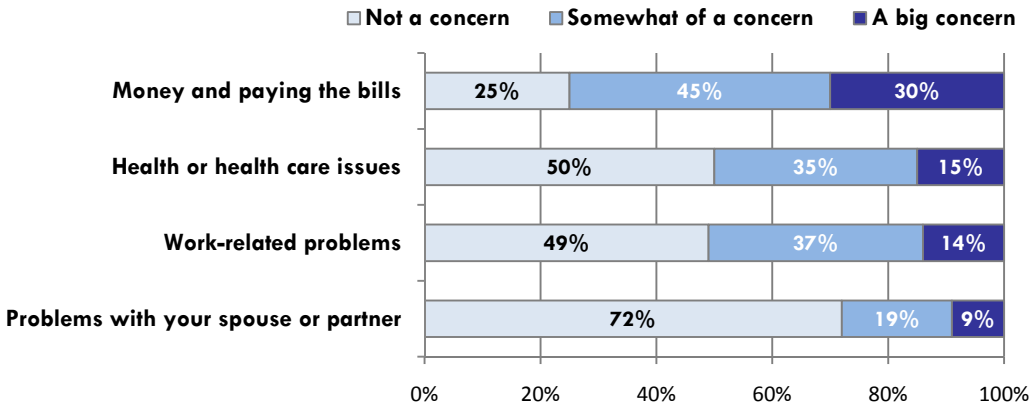
Source: Parent Information Form (2010)

Note: Percentages are based on 1,176 responses.

Potential Sources of Family Stress

A set of four questions answered by parents assessed the degree to which they were facing challenging family circumstances. The majority of parents who responded reported at least some concern over money and paying the bills; 30% felt this was "A big concern." About half of families reported that work issues or health/healthcare issues were at least somewhat of a concern. Fewer families (28%) felt some level of concern about problems with their spouse or partner.

Figure 27. **Parent Reports of Life Concerns**



Source: Parent Information Form (2010).

Note: Sample sizes are as follows (from top to bottom): 1,221, 1,208, 1200, and 1,193.

Other Indicators of Possible Family Risk

Some families in the assessment reported challenging life circumstances. Eight percent of children were born to a teenage mother. In addition, 22% of parents reported being a single parent, and 25% had lost a job in the past year.

Figure 28. **Indicators of Possible Family Risk**

Risk Variable	Percent
Teen mother when child was born	8%
Single parent	22%
Parent lost job in the last year	25%

Source: Parent Information Form (2010).

Note: Sample sizes are as follows: 1,167, 1,218, 1,195.

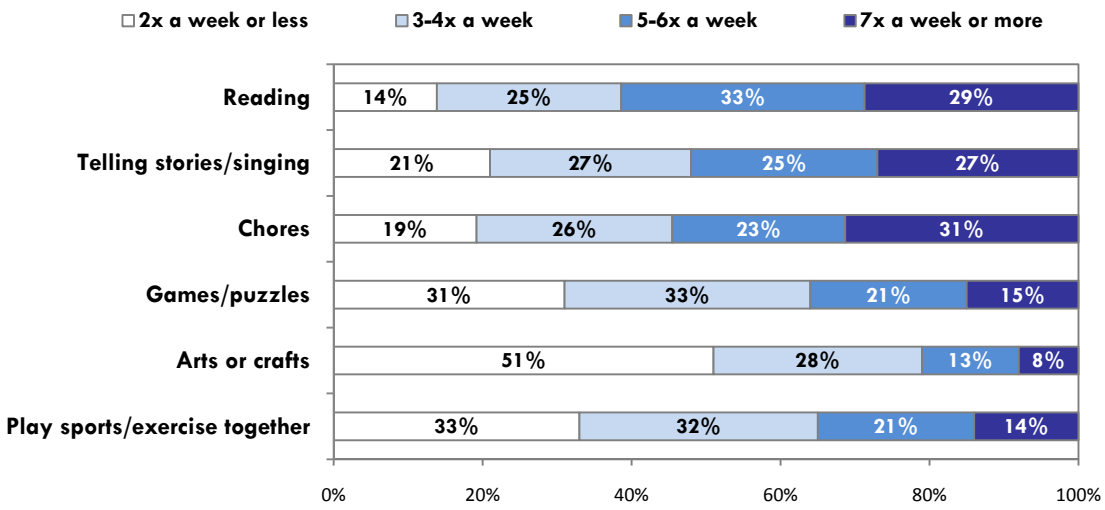
A Picture of Family Activities and Daily Routines

To get a better picture of the activities in which families of new kindergarten students engage, the *Parent Information Form* asked parents to report how often they spent time doing a variety of activities with their child during a typical week, including:

- Reading for more than five minutes
- Telling stories or singing songs
- Involving children in household chores
- Playing games or doing puzzles
- Doing arts and crafts
- Playing a sport or exercising together

Sixty-two percent of families read with their children five or more times per week. Just over half (52%) told stories or sang songs with children five or more times per week. Fifty-four percent involved their children in chores five or more times per week. Slightly more than one-third of families were playing games or doing puzzles or playing sports or exercising with their children five or more times per week (36% and 35% of families, respectively). Doing arts and crafts with children was a relatively infrequent activity for most families; about half (51%) did this fewer than three times per week.

Figure 29. **Frequency of Family Activities**



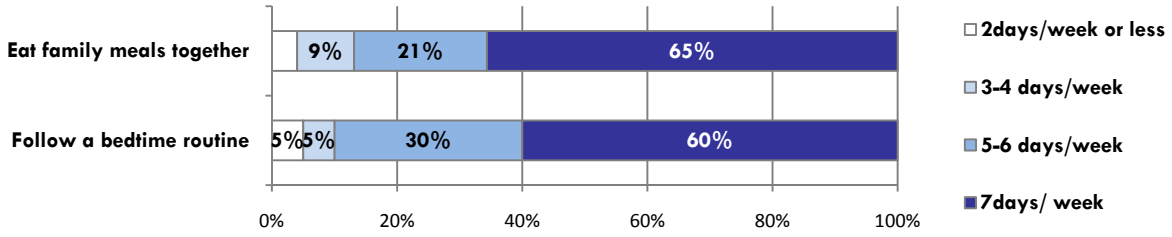
Source: Parent Information Form (2010)

Note: Percentages are based on 1,208-1,209 families. Percentages may not sum to 100 due to rounding.

The *Parent Information Form* also included questions about several daily routines, including the frequency of family meals and bedtime routines. As the following figure shows, most families

(65%) ate at least one meal together every day of the week. Most children (60%) followed a bedtime routine each night, but 10% followed a bedtime routine four nights a week or less.

Figure 30. **Frequency of Family Routines**



Source: Parent Information Form (2010)

Note: Percentages are based on 1,202 families. Percentages may not sum to 100 due to rounding. Findings less than five percent are not labeled.

Most children in the assessment (85%) had bedtimes between 8:00 and 9:30 pm, but eight percent went to bed at 10:00 or later.

Figure 31. **Bedtime**

Time	Percent
Before 8 pm	7%
8:00 – 8:30 pm	45%
9:00 – 9:30 pm	40%
10:00pm or later	8%

Source: Parent Information Form (2010)

Note: Sample size = 1,255. Percentages may not sum to 100 due to rounding.

Most children ate breakfast each day before school, but 17% missed at least one weekday breakfast. Eighty-eight percent of children had breakfast at home before leaving for school.

Figure 32. **Frequency and Settings of Weekday Breakfasts**

Breakfast Eating	Percent
Number of weekdays child has breakfast	
0 – 2 days	7%
3-4 days	10%
All 5 days	83%
Where child eats breakfast	
At home	88%
On the way to school	2%
At school	9%
Other	1%

Source: Parent Information Form (2010)

Note: Sample size = 1,242 and 1,165, respectively. Percentages may not sum to 100 due to rounding.

Amount of "Screen Time"

The American Academy of Pediatrics (AAP) recommends that young children get no more than two hours of "screen time" per day. Parents were asked to report the amount of time their child spent watching television or videos or playing video or computer games.

On average, children in this assessment spent just under two hours per day on "screen time" activities (mean = 117 minutes). Nearly one-third of the children in this sample (31%) were spending more than the recommended two hours per day on screen time activities, according to parent reports.

Figure 33. **Overall Screen Time Spent by Children per Day**

Screen time	Percent
0 – ½ hour	12%
More than ½ - 1 hour	18%
More than 1 - 1½ hours	14%
More than 1½ hours - 2 hours	25%
More than 2 hours - 3 hours	19%
More than 3 hours - 4 hours	8%
More than 4 hours	4%

Source: Parent Information Form (2010)

Note: Sample size = 1,213. Percentages may not sum to 100 due to rounding.

Use of Local Family Resources

Alameda County has a number of community resources for families. Parents were asked to indicate whether they had ever used any of seven local family resources, including local parks; libraries; recreational activities, camps and sports; local museums; community clinics; art/music programs, or anything else. Local parks and libraries were the most likely to have been used by families (83% and 70%, respectively). About half (49%) had also used local recreational activities, camps, and sports. However, few families had used the other local resources. About one-third had been to local museums, 18% had been involved in an arts or music program, and 15% had used a community clinic. On average, families had used 2.72 family resources.

Figure 34. **Local Family Resources Used**

Local Resources	Percent
Local parks	83%
Libraries	70%
Recreational activities, camps, and sports	49%
Local museums	33%
Arts/music program	18%
Community clinic	15%
Other	4%
None of the above	7%

Source: Parent Information Form (2010)

Note: Sample size = 1,239.

Use of Parenting Programs, Services and Supports

The *Parent Information Form* included a list of nine programs, services, and supports for families with children; parents were asked to indicate which they had used. On average, parents had used just under three of the listed supports (mean = 2.88). The most commonly used was regular medical check-ups while pregnant; however, while this is recommended for all pregnant women, only 79% of women in this sample reported having received such check-ups. Just under half of families (47%) had received assistance from WIC (Women, Infants, Children). Seven percent of the families had accessed none of the parenting supports listed.

Figure 35. **Receipt of Parenting Programs, Services and Supports**

Parenting Programs, Services and Supports	Percent
Regular medical check-ups while pregnant	79%
WIC	47%
Help from extended family	43%
Information from your child's child care provider	33%
Help from neighbors and/or friends	32%
Parent education classes	23%
Parent support groups	12%
Information or programs at your church/religious organization	11%
Home visits from a nurse, community worker, or other provider	10%
None of the above	7%

Source: Parent Information Form (2010)

Note: Sample size = 1,240.

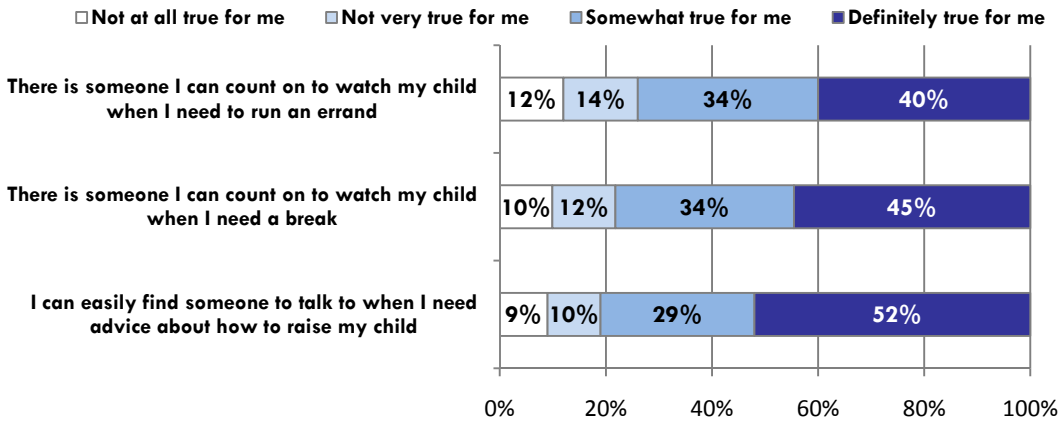
Perceptions Related to Parenting

The *Parent Information Form* included a set of questions to assess parents' perceptions of being supported in their parenting and having social resources to parent effectively. Parents were asked if:

- There was someone they could count on to watch their child when they needed to run an errand
- There was someone they could count on to watch their child when they needed a break
- They could easily find someone to talk to when they needed advice about how to raise their child

The figure that follows shows that parents sometimes had needs for additional social support related to parenting. Many parents did not feel that they had someone they could count on to watch their child if they needed to run an errand or if they needed a break; 26% and 22% of parents, respectively, felt that having this kind of support was "not very" or "not at all" true for them. In both instances, less than half of parents definitely felt they had someone they could count on to watch their child if needed. More parents (52%) reported that they definitely had someone to talk to about how to raise their child, but there were some needs in this domain as well.

Figure 36. **Parents' Perceptions of Support for Parenting**

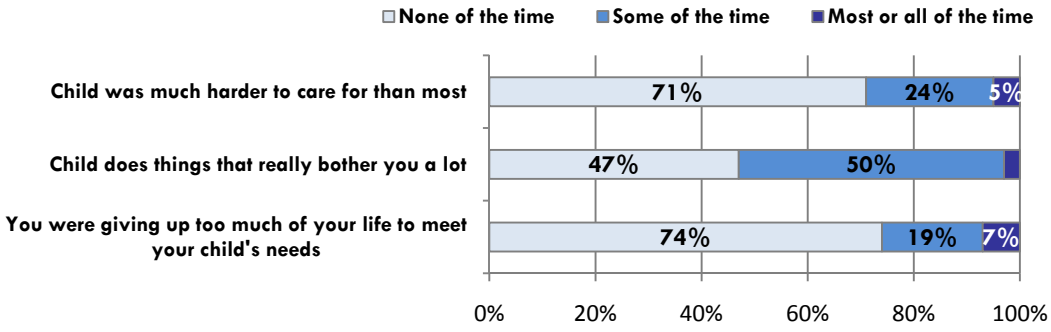


Source: Parent Information Form (2010).

Note: Sample sizes are as follows (from top to bottom): 1,242, 1,235, and 1,229. Percentages may not sum to 100 due to rounding.

Parents also provided information about how often they experienced negative feelings about parenting. Twenty-nine percent of parents reported feeling at least some of the time that their child was much harder to care for than most. About half (53%) indicated that – at least some of the time – their child does things that really bother them a lot. Twenty-six percent of parents felt that they were giving up too much of their lives to meet their child's needs at least some of the time.

Figure 37. **Parenting Attitudes**

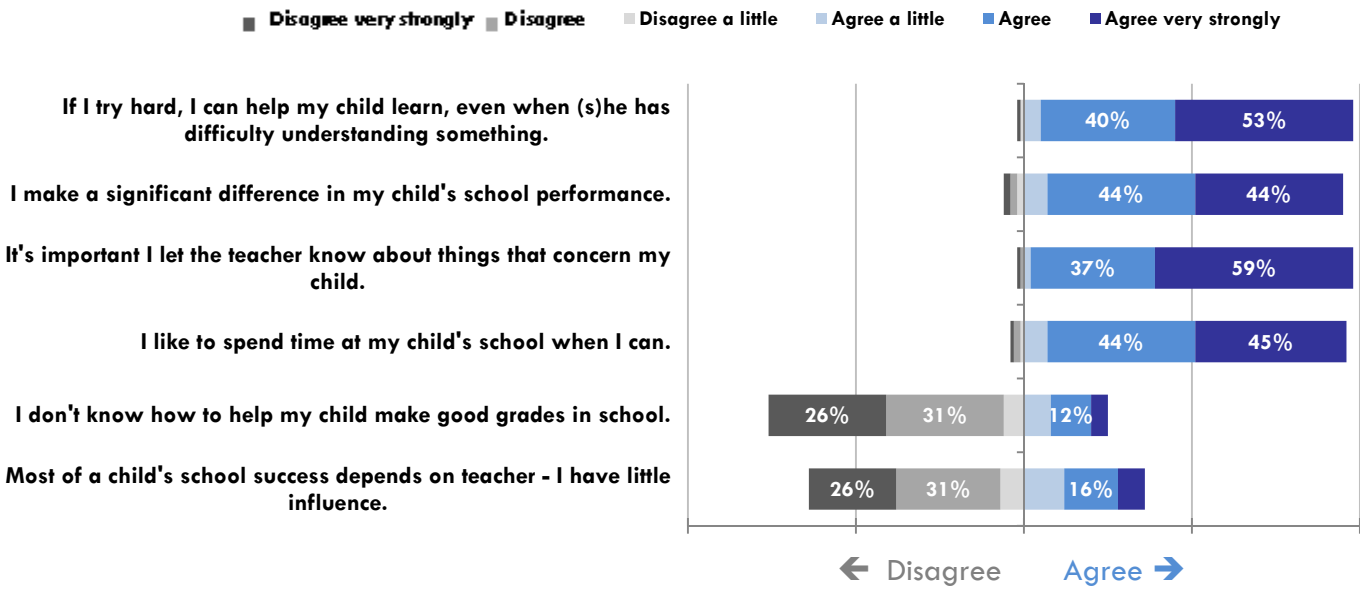


Source: Parent Information Form (2010).

Note: Sample sizes are as follows (from top to bottom): 1,233, 1,228, and 1,217. Percentages may not sum to 100 due to rounding. Findings less than five percent are not labeled.

Finally, parents indicated how much they agreed or disagreed with several statements regarding their own role in their child's education. Generally, parents reported that they believe in taking an active role in their child's education, but there is some suggestion that parents may need more tools and resources to feel empowered in making a difference. For example, 36% of parents agreed at least a little with the statement, "Most of a child's success in school depends on the classroom teacher – I have limited influence." Similarly, 24% of parents indicated that they don't know how to help their child make good grades in school.

Figure 38. **Parent Beliefs About Their Role in Child's Education**



Source: Parent Information Form (2010).

Note: Sample sizes are as follows (from top to bottom): 1,230, 1,197, 1,195, 1,225, 1,191, and 1,221.

Section Summary

Children in the assessment were on average about five years and three months old when they began kindergarten. The largest percentage of students (43%) were from Hispanic/Latino backgrounds, but there was great diversity in the sample. About one in four students was Caucasian, one in ten was African American, and eight percent of students were each from Asian and multi-racial backgrounds. Slightly less than half of the student sample (45%) were English Learners.

Eight percent of children had identified special needs at the time of kindergarten entry (most often speech- and language-related). Another four percent of students were suspected by parents or teachers as possibly having special needs, but they had not (yet) been formally identified. Ten percent of students had been born with a low birth weight (a risk factor for delays in readiness). Students were generally well-connected to health care resources; 98% had a regular doctor, pediatric provider, or clinic, and 97% had some form of health insurance.

Thirteen percent of the sample had mothers who had not graduated from high school, and almost half of families (48%) earned less than $35,000 per year. Money and paying the bills were at least somewhat of a concern for three-fourths of the sample. Eight percent of students had been born to a teen mother. Twenty-two percent lived in a single-parent household, and 25% had a parent who had lost a job in the past year.

Families engaged in many activities together during a typical week. More than half of parents (52%) reported reading with their children an average of five times a week or more, and 69% of children were within the AAP-recommended guidelines for daily screen time, spending an

average of two hours or less per day in front of a computer or television. The most frequently used local family resources included parks (83% of families) and libraries (70% of families).

Although parents reported adequate social support for their parenting needs, more than half indicated that they had some needs for support when they needed to run an errand, take a break, or talk to someone to get advice about parenting. Some parents also occasionally experienced negative feelings about parenting, with three to seven percent indicating some negative feelings "most or all of the time." When parents specifically reported on their beliefs about their own role in their child's education, parents generally reported taking an active role in their child's schooling, but some may need more tools and resources to feel that they can make a difference.

A small percentage of students in the sample (4%) were identified by teachers as coming to school feeling hungry, tired, or ill "on most days" or "just about every day." In previous readiness studies – as well as this one – these students tended to be far behind their peers on their readiness skills. Because of this, the characteristics of these students with potential well-being concerns were examined further to better understand the circumstances of this at-risk group. Results of these analyses suggest that students with well-being concerns appeared to demonstrate some levels of heightened family stress. Compared to their peers, they were more likely to come from a single-parent household, were more likely to have a parent who lost a job last year, their parents had more negative parenting attitudes, and their parents reported greater life concerns.

PART 2

Preschool and Other Early Care Experiences

Contents of this Chapter:

This chapter describes students' early care and education experiences in the year prior to kindergarten and explores the child and family characteristics that were associated with a greater likelihood of preschool attendance.

Key Findings:

- *Early Care and Education Experiences of Students in the Year Prior to Kindergarten Entry:*
  - Sixty-one percent of students had attended a licensed preschool or childcare center
  - Eight percent had attended the Summer Pre-K program sponsored by First 5 Alameda County
  - In addition to parental care, 17% of students assessed had spent time in relative/neighbor care, and eight percent had attended licensed care in someone's home

- *What Factors were Associated with Preschool Attendance?*
  - As family income and education levels increased, so did the likelihood of children having attended preschool, although there was a dip in preschool attendance rates among middle-income families making $35,000-$49,999.
  - Hispanic/Latino students were the least likely racial/ethnic group to have attended preschool, and Caucasian students were the most likely to have done so.

- *Preschool Attendance and Family Practices*
  - Compared to the parents of children who had not been to preschool, parents of preschool attendees engaged in more kindergarten transition activities; used more parent programs, services, and supports; and engaged in more weekly family activities (including reading with their child).

Preschool and Other Early Care Experiences

Section Overview

How many children were exposed to preschool prior to kindergarten? What other types of early care experiences did children have? Parents and teachers both provided information about each child's care and education in the year before entry into kindergarten. This section summarizes the types of early care settings in which children spent time prior to kindergarten and examines characteristics of students who have and have not attended a licensed preschool or childcare center.

Types of Early Care Experiences

As the figure shows, two-thirds of children (67%) had received their usual child care from a parent (alone or in combination with other sources). Seventeen percent were cared for regularly by a relative or neighbor, seven percent by a babysitter or nanny, and eight percent had attended a family child care home.

Data regarding preschool experience was represented using a combination of parent-reported and teacher-reported information. By combining these two data sources, it was determined that 61% of students in the assessment had attended a licensed preschool or childcare center, including Head Start, State Preschool, or private program.[5] This figure is similar to the 59% preschool enrollment rate reported by Children Now (2010) in their 2010 California County Scorecard for Alameda County.

Figure 39. **Students' Early Care Experiences**

Type of Child Care Arrangements in the Year Prior to Kindergarten	Percent of students
Parent provided usual child care	67%
Relative or neighbor	17%
Babysitter or nanny	7%
Licensed care in someone's home (teacher or parent report)	8%
Licensed preschool or childcare center (e.g., Head Start, State Preschool, private – teacher or parent report)	61%

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Percentages are based on the following sample sizes: 1,189, 1,189, 1,189, 1,350, and 1,350.

[5] More information about the calculation of preschool rates is included in Appendix 8.

In addition, eight percent of students attended a short-term summer pre-K program sponsored by F5AC, and three percent of students attended a different summer pre-K program.

Figure 40. **Attendance at a Summer Pre-K Program**

Attended Summer Pre-K	Percent
F5AC Summer Pre-K	8%
Summer Pre-K that was not F5AC	3%

Source: ECChange database and Kindergarten Observation Form I (2010), respectively.

Note: Sample sizes are as follows: 1,394 and 878. Children were counted as attending F5AC's Summer Pre-K if they were able to be matched to F5AC database records.

Amount of Time Spent and Languages Spoken

How much time were children spending in these early care settings in the year prior to kindergarten? Almost two-thirds of children (62%) who were cared for by a relative or neighbor or by a babysitter or nanny attended licensed care spent 20 or fewer hours in their care per week. Children receiving licensed care in someone's home most often spent 31 to 40 hours there. The most common amount of weekly time spent in preschool or licensed center-based care was between 1 to 20 hours (43% of children).

Figure 41. **Students' Weekly Hours in Different Early Care Settings**

Type of Child Care Arrangements	Percent spending 1-20 hours per week	Percent spending 21-30 hours per week	Percent spending 31-40 hours per week	Percent spending 41+ hours per week
Child care by parent	13%	10%	10%	67%
Relative or neighbor	62%	14%	12%	12%
Babysitter or nanny	62%	17%	14%	7%
Licensed care in someone's home	24%	20%	42%	13%
Licensed preschool or childcare center (e.g., Head Start, State Preschool, private)	43%	19%	27%	12%

Source: Parent Information Form (2010).

Note: Percentages are based on the following sample sizes: 700, 203, 84, 45, 485. Percentages may not add up to 100 due to rounding. Percentages may not be stable due to small sample sizes and/or small percentages of completed responses.

Parents were asked to indicate the languages spoken in the child care settings where their children spent time. English (78%) and Spanish (41%) were by far the most common languages spoken in these child care settings.

Figure 42. **Languages Spoken in Children's Child Care Settings**

Languages in Child Care Arrangements	Percent of students
English	78%
Spanish	41%
Chinese/ Cantonese/ Mandarin	4%
Filipino	3%
Vietnamese	1%
Farsi or Dari	1%
Korean	1%
Other	5%

Source: Parent Information Form (2010).

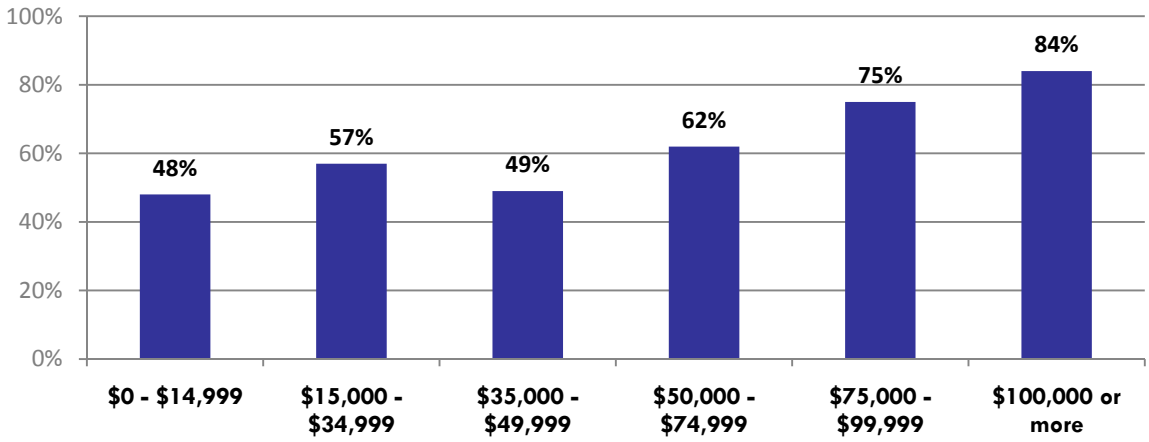
Note: Sample size = 1,210. Percentages sum to more than 100 because respondents could check more than one language.

Who Attends Preschool?

Preschool attendance has been shown in countless studies to be strongly related to enhanced school readiness skills. Among children in this sample, 61% of children had attended a licensed preschool or childcare center, including Head Start, State Preschool, or private program. Who are the children in Alameda County who are being exposed to these preschool settings? In this section, various child and family background factors are examined to see what groups of children are more likely to have attended one of these preschool types.

The figure that follows breaks down preschool attendance as a function of families' income levels. As the figure shows, there is a general trend showing that as income increases, so does attendance at a licensed preschool or childcare center. One notable exception – which has been mirrored in several recent regional datasets as well – shows a slight dip in these preschool rates among families earning $35,000 - $49,999 per year. This may be an example of a phenomenon discussed by some ECE experts who have argued that a gap in child care coverage exists for middle-income families, such that working class families earn too much money to qualify for child care subsidies, but still cannot afford to enroll their children in preschool on their own salaries.

Figure 43. **Licensed Preschool or Childcare Center Attendance (Head Start, State Preschool or Private Program) Attendance, by Income Level**

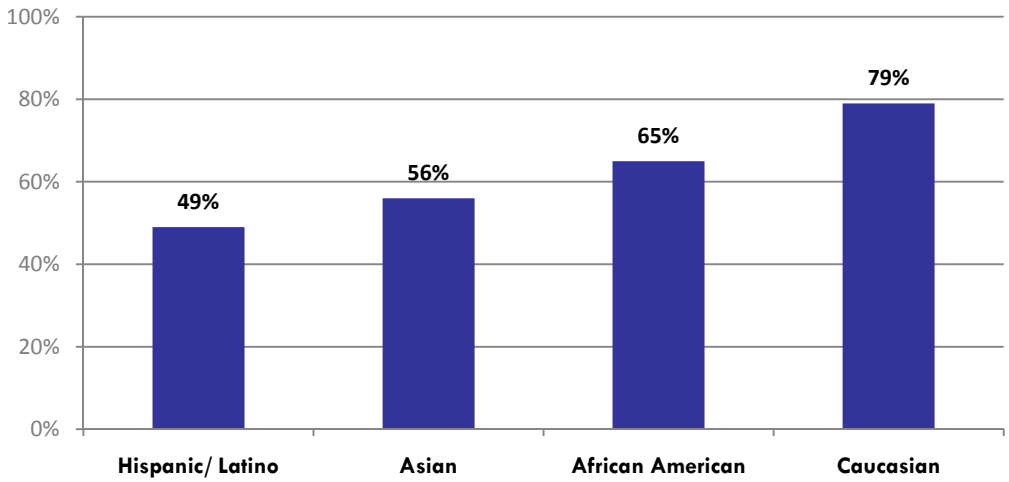


Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Total sample size = 1172. Preschool rates differ significantly as a function of income, according to chi-square tests ($p < .001$).

Rates of attendance at licensed preschool or childcare centers were also examined within the four largest racial/ethnic groups in the sample. As the figure shows, Hispanic/Latino children were least likely to have attended preschool, and Caucasian children were most likely to have done so.

Figure 44. **Licensed Preschool or Childcare Center Attendance (Head Start, State Preschool or Private Program) Attendance, by the Four Largest Racial/Ethnic Groups**



Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Percentages are based on 561 Hispanic/ Latino students, 105 Asian students, 136 African American students, and 347 Caucasian students. Overall preschool attendance rates differed significantly, according to chi-square tests ($p < .001$).

Were students with experience in these preschool settings different in any other ways from students without experience in a licensed preschool or childcare center? The figure that follows compares the composition of the preschooler and non-preschooler groups.

Several differences between the two groups are apparent. First, English Learners made up a much bigger portion of the non-preschooled group than the group who had been to preschool. In addition, 49% of children without preschool experience came from a family where the mother had more than a high school education, whereas 71% of children with preschool experience had a mother whose highest education level was beyond high school.

There were several group differences in family practices and experiences as well. Compared to parents of children who had not been to preschool, parents of preschool attendees:

- engaged in significantly more kindergarten transition activities;
- used more parent programs, services, and supports;
- engaged in more weekly family activities;
- were more likely to read to children on a daily basis; and
- reported greater levels of parenting support.

Figure 45. **How Do Preschoolers and Non-Preschoolers Differ?**

Child & Family Characteristics	Among non-preschoolers	Among preschoolers
Percent who are 5 years or older* **	**72%**	**81%**
Percent who are girls	53%	51%
Percent who are English Learners* **	**59%**	**36%**
Percent who have special needs (parent or teacher report)	6%	8%
Percent whose mother is educated beyond high school* **	**49%**	**71%**
Percent who are read to an average of once a day or more* **	**18%**	**35%**
Average number of weekly family activities* **	**23.76**	**26.43**
Average number of K transition activities (out of 10 possible)* **	**3.46**	**4.72**
Average number of parent programs, services, supports received (out of 9 possible)* **	**2.46**	**3.16**
Average levels of parent social support (1 to 4 scale) **	**3.04**	**3.18**

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Sample sizes range from 457-528 for children without preschool experience and 729-821 for children with preschool experience. Significant differences according to chi-square tests or t-tests are indicated in bold and as follows: * $p < .05$; ** $p < .01$; *** $p < .001$.

Section Summary

Sixty-one percent of children had attended a licensed preschool or childcare center, including Head Start, State Preschool, or a private program. Along with usual child care provided by a parent, some children (17%) were cared for by a relative or neighbor in the year prior to kindergarten. Eight percent of students in this sample had been to licensed care in someone's

home, and eight percent of students had attended the Summer Pre-K program sponsored by First 5 Alameda County.

Who were the students who had attended a licensed preschool or childcare center? As family income and education levels increased, so did the likelihood of children having attended preschool, although there was a dip in preschool attendance rates among middle-income families making $35,000-$49,999. Hispanic/Latino students were the least likely racial/ethnic group to have attended preschool, and Caucasian students were the most likely to have done so.

Preschool may have some impacts on family practices and families' connectedness to resources to support their children. Compared to the parents of children who had not been to preschool, parents of preschool attendees engaged in more kindergarten transition activities; used more parent programs, services, and supports; and engaged in more weekly family activities (including reading with their child).

PART 3
Transitions to Kindergarten

Contents of this Chapter:

What types of information do families receive to help with the transition into kindergarten? In what types of activities do they engage prior to their child's entry into school? This section first describes these preparations for kindergarten and then examines the results of these efforts by reporting teachers' perceptions of the quality of children's transitions to school, including whether students' transitions were smooth, whether they were nervous at school, how often they participated in the classroom, and how much they enjoyed school.

Key Findings:

Information Provided to Families

- Preschool/child care teachers were a primary source of information about the transition to kindergarten for parents.
- About one in five parents reported that they did not receive information from teachers or others about how and when to register their child for school. In addition, nearly one third of parents did not receive information about their own child's readiness for school. This is potentially important because – in this and other readiness studies – analyses have shown that having this type of information is significantly associated with enhanced student readiness.

Families' Transition Activities

- About three-fourths of parents visited school with their child prior to kindergarten. Most also worked on school skills with their child and had attended a parent meeting or orientation.
- On average, parents had engaged in more than four transition activities out of a list of 10 possible activities. Five percent of parents had not done any of the 10 activities to prepare their child for kindergarten.

Children's Transitions to Kindergarten

- Most children were reported by their teachers to have had smooth transitions into school across a set of four transition measures that asked about the smoothness of their transition, how nervous they were, their participation levels in class, and their enjoyment of school.
- Better school transitions were associated with being older, having attended preschool, and speaking English proficiently.

Transitions to Kindergarten

Section Overview

What types of information do families receive to help with the transition into kindergarten? In what types of activities do they engage prior to their child's entry into school? This section first describes these preparations for kindergarten and then examines the results of these efforts by reporting teachers' perceptions of the quality of children's transitions to school, including whether students' transitions were smooth, whether they were nervous at school, how often they participated in the classroom, and how much they enjoyed school.

Families' Exposure to Kindergarten Information and Opportunities

On the *Parent Information Form*, parents were asked about the types and sources of information and opportunities they received to better prepare their child for entering kindergarten. The figure that follows shows that not all parents are receiving information about how and when to register their child for kindergarten (only 79% did in this sample), and close to one-third did not receive information about how ready their child was for school. However, the information in the figure does suggest that preschools and child care providers are serving as a good resource for information for parents. Preschools and child care providers were the primary source for the majority of parents for general information about how to develop skills children need for kindergarten, as well as specific information about their own child's readiness levels.

Figure 46. **Receipt of Information or Opportunities Related to Kindergarten Transition**

Type of information/opportunity	Percent who received	Among those who received it, percent who got it from…		
		Preschool/ Child care provider	Elementary school	Another source
General information about how to develop skills children need for kindergarten	76%	74%	18%	19%
Specific information about readiness of own child	69%	80%	13%	11%
General information about child development and parenting	67%	56%	10%	43%
Information about how and when to register child for school	79%	47%	39%	22%

Source: Parent Information Form (2010).

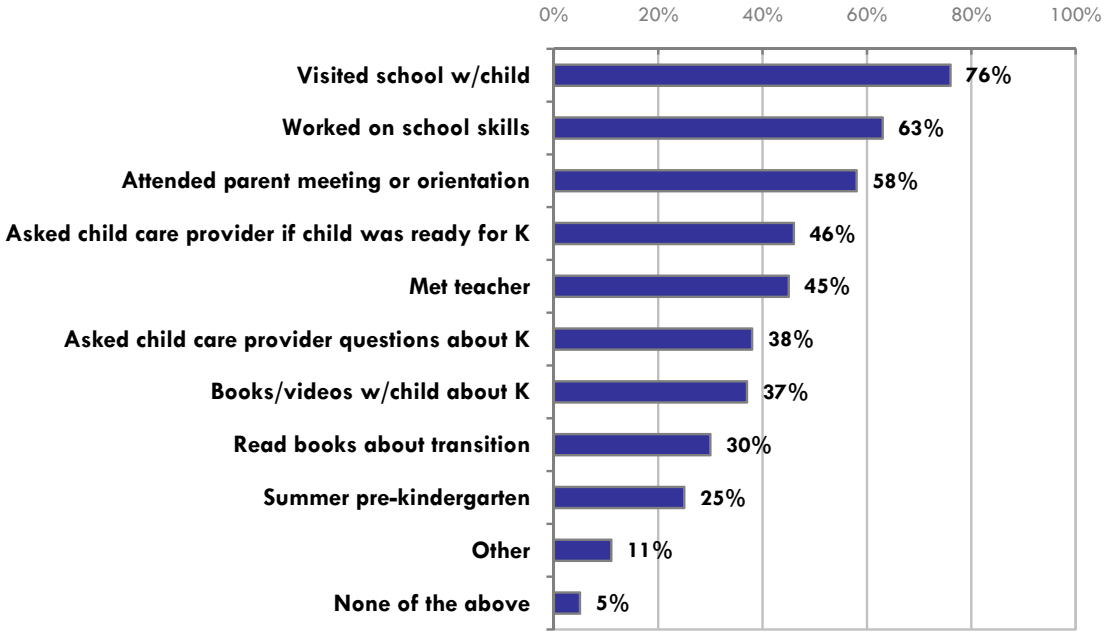
Note: Percentages who received information/ opportunities are based on the following sample sizes: 1,158, 1,148, 1,103, and 1,136. Percentages for the different sources of information are based on families who indicated that they did receive a particular type of information. Parents could choose multiple sources of information.

Parents' Engagement in Transition Activities

Parents were asked to report on which of 10 possible kindergarten transition activities they had engaged in prior to the start of school. The figure that follows shows the percentage of parents who indicated that they had helped their child get ready for school in the listed ways.

About three-fourths of parents (76%) had visited their child's school with them. Sixty-three percent had worked on children's school skills and more than half had attended a parent meeting or orientation (58%). In all, parents had engaged in more than four transition activities, on average, out of 10 possible (mean = 4.23), with five percent of parents indicating that they had done none of these activities.

Figure 47. **Percentage of Parents Engaging in Transition Activities**



Source: Parent Information Form (2010).

Note: Percentages are based on 1,237 parents.

Smoothness of Students' Transitions

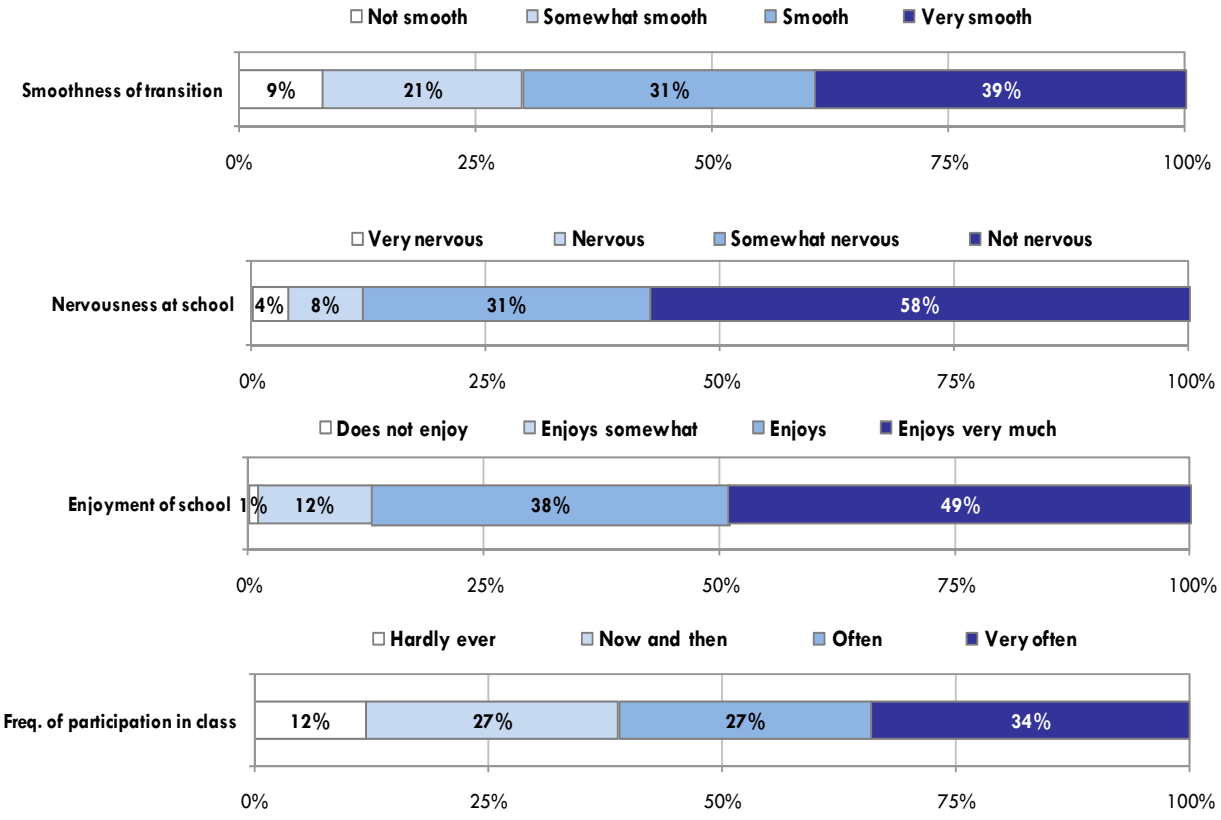
To learn more about how well children transitioned into kindergarten, teachers were asked to complete the *Kindergarten Observation Form II* (*KOF II*) once they had finished their assessments of students' skills on the *KOF I*. To complement the measurable skills that students possessed upon kindergarten entry, the *KOF II* tapped into students' progress in adjusting to the new demands of school life. Teachers provided information on four dimensions of students' school transitions, including the following:

- The smoothness of each student's transition into school
- How nervous each student seemed at school
- How often each student participated in class discussions

- How much each student seemed to enjoy school

Results revealed that most students experienced a "smooth" or "very smooth" transition to school (31% and 39% of students, respectively). However, nine percent did not have a smooth transition. Teachers characterized 58% of students as not nervous at school, with the rest showing some amount of nervousness, ranging from being "somewhat nervous" (31%) to "very nervous" (4%). Sixty-one percent of students participated "often" or "very often" at school, but some children were quiet in class; 12% "hardly ever" participated. Nearly half (49%) of students were seen by teachers as enjoying school "very much," and only one percent were seen as not enjoying school at all.

Figure 48. **Students' Transitions into Kindergarten**



Source: Kindergarten Observation Form II (2010).

Note: Sample sizes are as follows (from top to bottom): 1,377, 1,372, 1,351, and 1,369.

Which children experienced easier transitions to school? The figure on the following page shows the correlations between several key child variables and the four transition measures. Older children tended to experience better transitions into kindergarten, as did children who had attended preschool. Children who were English Learners (who also attend preschool at lower rates than non-EL students) tended to have more difficult transition experiences, especially in the domain of class participation, which suggests that some transition difficulties may be associated with these children's ability to communicate verbally with their teachers.

Figure 49. **Strength of Correlations between Various Child Characteristics and Smooth Kindergarten Transitions**

Child characteristics	Smoothness	No nervousness	Participation	Enjoyment
Being older	.15***	.13***	.19***	.09**
Being a girl	.12***	.00	.03	.08**
Not having special needs	.13***	.08**	.07	.05
Being proficient in English	.10***	.10***	.19***	.09**
Having experience at a licensed preschool or childcare center (e.g., Head Start, State Preschool, private)	.10***	.13***	.16***	.06
Having any summer pre-K experience	.06	.08	.01	.11**
Family engaged in more transition activities	.14***	.08**	.11***	.07

Source: Kindergarten Observation Form II and Parent Information Form (2010).

Note: Sample sizes range from 1,215-1,375. Significant correlations are noted as follows: *** $p < .001$; ** $p < .01$.

Section Summary

Although most parents are receiving information to help ensure their child's smooth transition to kindergarten, there are some areas where more information might be needed. For example, about one in five parents reported that they did not receive information about how and when to register their child for school. In addition, nearly one third of parents did not receive information about their own child's readiness for school; this is potentially important because – in this and other readiness studies – analyses have shown that having this type of information is significantly associated with enhanced student readiness.

Parents did a variety of things to assist their child in having a smooth transition to school. About three-fourths of parents visited school with their child prior to kindergarten. Most also worked on school skills with their child and attended a parent meeting or orientation. On average, parents had engaged in more than four transition activities out of a list of ten possible activities. Five percent of parents had done none of the 10 activities to prepare their child for kindergarten.

Most children were reported by their teachers to have had smooth transitions into school across a set of four transition measures that asked about the smoothness of their transition, how nervous they were, their participation levels in class, and their enjoyment of school. Better school transitions were associated with being older, having attended preschool, and speaking English proficiently.

PART 4

School Readiness in Alameda County 2010

Contents of this Chapter:

This section presents information on the readiness levels of students entering kindergarten in Fall 2010 in several ways, including the following:

- Children's readiness according to five *National Education Goals Panel* (*NEGP*) readiness skill groups
- Readiness levels according to the *Basic Building Blocks* of readiness, an alternate set of four skill groups that are based on data-driven sorting of the skills
- An item-by-item summary of all 24 readiness skills measured by the *Kindergarten Observation Form I (KOF I)* and how children's age relates to proficiency levels on the 24 items
- Readiness levels in the context of different benchmarks, including teachers' expectations and recent research using readiness scores on the *KOF I* to predict third grade success
- Parents' perceptions of their children's general readiness levels

Key Findings:

- Children's overall readiness in 2010 was above the "In progress" level; their average readiness score was 3.29 on a four-point scale where four was "Proficient."
- Using the readiness framework that corresponds to the *NEGP*, students were most ready in *Cognition & General Knowledge* skills, and they were least ready in *Communication & Language Usage*. According to the *Basic Building Blocks* groupings of skills, children were most ready on their *Self-Care & Motor Skills*, and they were least ready in their *Self-Regulation* skills.
- Across all domains of readiness, students' average proficiency levels exceeded the levels teachers felt they needed to be school-ready. However, a small portion of students had skill levels that were far below the levels of proficiency teachers felt they needed, particularly in the area of *Self-Regulation* skills.
- *Self-Regulation* skills were seen by teachers as being important for students' success, but these skills also require substantial time and are perceived by teachers as difficult to impact.
- Forty-one percent of students had proficiency levels in *Kindergarten Academics* and *Self-Regulation* skills that have been shown in prior longitudinal research to be most strongly related to third grade success; 28% had limitations in these skill areas that have been linked with a fairly low probability of third grade success.
- Parents perceived their children to be more ready for school than did teachers. However, like teachers, parents felt that their children had the strongest skills in physical well-being and coordination, and had the greatest needs for development of their social and emotional skills.

School Readiness in Alameda County – 2010

Section Overview

As described in the "Introduction" section of this report, there are many ways to characterize children's readiness for school. This section presents information on the readiness levels of students entering kindergarten in Fall 2010 in several ways, including the following:

- Children's readiness according to five *National Education Goals Panel* (*NEGP*) readiness skill groups
- Readiness levels according to the *Basic Building Blocks* of readiness, an alternate set of four skill groups that are based on data-driven sorting of the skills
- An item-by-item summary of all 24 readiness skills measured by the *Kindergarten Observation Form I (KOF I)* and how children's age relates to proficiency levels on the 24 items
- Readiness levels in the context of different benchmarks, including teachers' expectations and recent research using readiness scores on the *KOF I* to predict third grade success
- Parents' perceptions of their children's general readiness levels

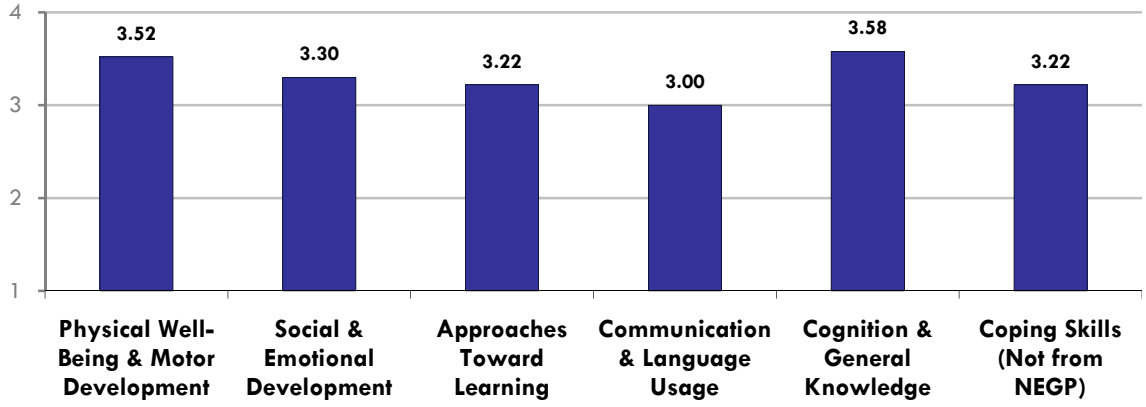
Readiness According to the *NEGP*

As described in the "Introduction" section of this report, the original version of the *KOF I* sorted (and reported) skills according to five *NEGP* categories, including:

- *Physical Well-Being & Motor Development*
- *Social & Emotional Development*
- *Approaches Toward Learning*
- *Communication & Language Usage*
- *Cognition & General Knowledge*

The figure that follows uses these *NEGP* readiness dimensions to examine children's readiness scores (plus a newer set of four items reflecting children's coping skills). Children's scores were the lowest on *Communication & Language Usage*; children scored the highest on *Physical Well-Being & Motor Development*.

Figure 50. **Students' Proficiency across the Five *NEGP* Readiness Dimensions**



Source: Kindergarten Observation Form I (2010).

Note: Scores are based on 1,360-1,389 students. Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

Moving from the *NEGP* to the *Basic Building Blocks*

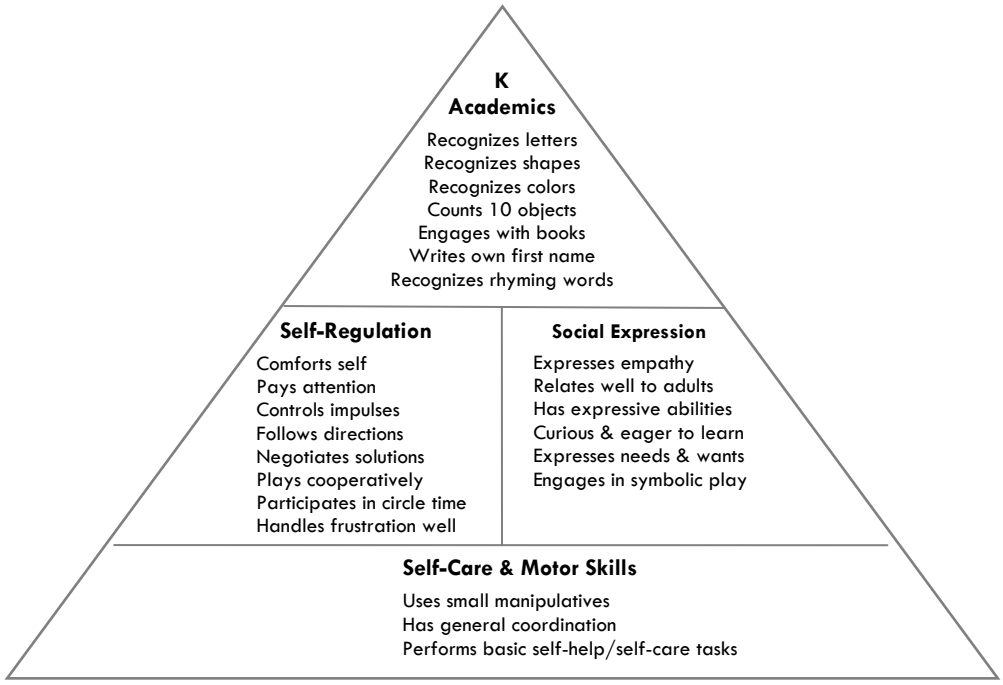
Because the *NEGP* classification system is widely used among many researchers and school readiness experts, descriptions of children's readiness in the *NEGP* framework and language facilitates connections between these data and a larger body of readiness-related interventions and research. However, a more recent data-driven sorting of the skills – based on a statistical procedure called factor analysis that has been conducted on multiple years of assessment data – has shown that the underlying dimensions of readiness on the *KOF I* are actually better represented by four skill groups that have been labeled the *Basic Building Blocks* of readiness. This way of classifying the readiness skills has been used more recently both because it is data-driven and because it has an intuitive appeal; school readiness experts and practitioners have responded very positively to these groups and support their use to advance discussions about how to define and address school readiness issues.

The sorting of the 24 readiness skills into these four dimensions is shown in the figure that follows. As the figure shows, the *Basic Building Blocks* include the following components: *Self-Care & Motor Skills, Self-Regulation, Social Expression,* and *Kindergarten Academics*. Reliability analyses conducted with data collected in this assessment again revealed strong interrelationships among the items within each *Basic Building Blocks*, with Cronbach's alpha coefficients ranging from 0.76 to 0.94:

- *Self-Care & Motor Skills*: Alpha = 0.76
- *Self-Regulation*: Alpha = 0.94
- *Social Expression*: Alpha = 0.92
- *Kindergarten Academics*: Alpha = 0.83

Notably, the *Basic Building Blocks* have been represented in the figure below and in previous assessments as a pyramid. Although we strongly believe that all the skill dimensions are essential components of readiness, the pyramid representation has been deliberately chosen to suggest a framework of skill progression. Basic skills related to taking care of oneself are the foundation, upon which rest key social-emotional component of readiness. The apex of the pyramid contains the beginnings of the more academically-oriented skills that will in turn provide children with a foundation for the content covered in kindergarten and beyond.

Figure 51. **Basic Building Blocks of Readiness**



A summary table on the next page provides a "crosswalking" of skills across the two different sorting methods. Each of the 24 readiness items is shown according to which of the five *NEGP* dimensions of readiness it sorts into, as well as in which one of the four *Basic Building Blocks* of readiness it belongs.

The *NEGP Physical Well-Being & Motor Development* category maps perfectly onto the *Basic Building Block* dimension of *Self-Care & Motor Skills*. *Approaches to Learning* skills mostly sort into the *Self-Regulation* skills in the *Basic Building Blocks* (with one skill going into *Social Expression),* whereas *Social & Emotional Development* divides evenly into the *Basic Building Blocks* categories of *Self-Regulation* and *Social Expression. Communication & Language Usage* and *Cognition & General Knowledge* largely map onto the *Kindergarten Academics* dimension, with two skills in the *Social Expression* group.

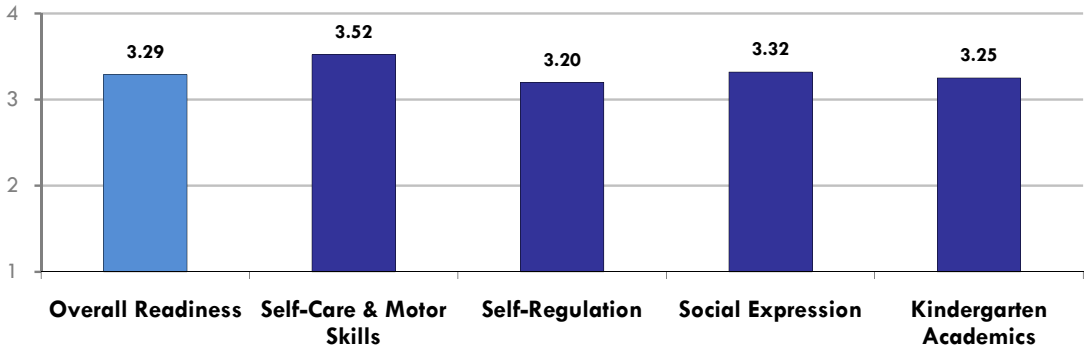
Figure 52. **Crosswalking Readiness Items from NEGP to Basic Building Blocks**

Skill Items	NEGP Dimensions	Basic Building Blocks
Uses small manipulatives	Phys Well-Being/Motor Dev	Self-Care & Motor Skills
Has general coordination on the playground	Phys Well-Being/Motor Dev	Self-Care & Motor Skills
Performs self-help/self-care tasks	Phys Well-Being/Motor Dev	Self-Care & Motor Skills
Relates appropriately to adults other than parent /primary caregiver	Social & Emotional Dev	Social Expression
Appropriately expresses needs and wants verbally in primary language	Social & Emotional Dev	Social Expression
Works and plays cooperatively with peers	Social & Emotional Del	Self-Regulation
Controls impulses and self-regulates	Social & Emotional Dev	Self-Regulation
Expresses curiosity and eagerness for learning	Approaches to Learning	Social Expression
Stays focused/pays attention during activities	Approaches to Learning	Self-Regulation
Follows one- to two-step directions	Approaches to Learning	Self-Regulation
Participates successfully in circle time	Approaches to Learning	Self-Regulation
Has expressive abilities	Communication & Lang	Social Expression
Recognizes the letters of the alphabet	Communication & Lang	Kindergarten Academics
Writes own name	Communication & Lang	Kindergarten Academics
Recognizes rhyming words	Communication & Lang	Kindergarten Academics
Engages with books	Communication & Lang	Kindergarten Academics
Engages in symbolic/imaginative play	Cognition & Gen'l Knowledge	Social Expression
Counts 10 objects correctly	Cognition & Gen'l Knowledge	Kindergarten Academics
Recognizes primary colors	Cognition & Gen'l Knowledge	Kindergarten Academics
Recognizes primary shapes	Cognition & Gen'l Knowledge	Kindergarten Academics
Comforts self using adult guidance when appropriate	N/A	Self-Regulation
Negotiates with peers to resolve social conflicts using adult guidance when appropriate	N/A	Self-Regulation
Expresses empathy or caring for others	N/A	Social Expression
Handles frustration well	N/A	Self-Regulation

Proficiency on the *Basic Building Blocks*

The figure that follows displays students' average scores – overall and on each of the four *Basic Building Blocks* dimensions – on a scale ranging from 1 ("Not yet") to 4 ("Proficient"). The figure shows that in 2010, students' overall readiness level was 3.29, which corresponds to a score that is well above the "In progress" level. Students' scores were highest on *Self-Care & Motor Skills,* followed by *Social Expression* and *Kindergarten Academics*. Students were least proficient in their *Self-Regulation* skills, with average scores of 3.20 out of a possible 4.00.

Figure 53. **Students' Proficiency across Four *Basic Building Blocks* of Readiness**



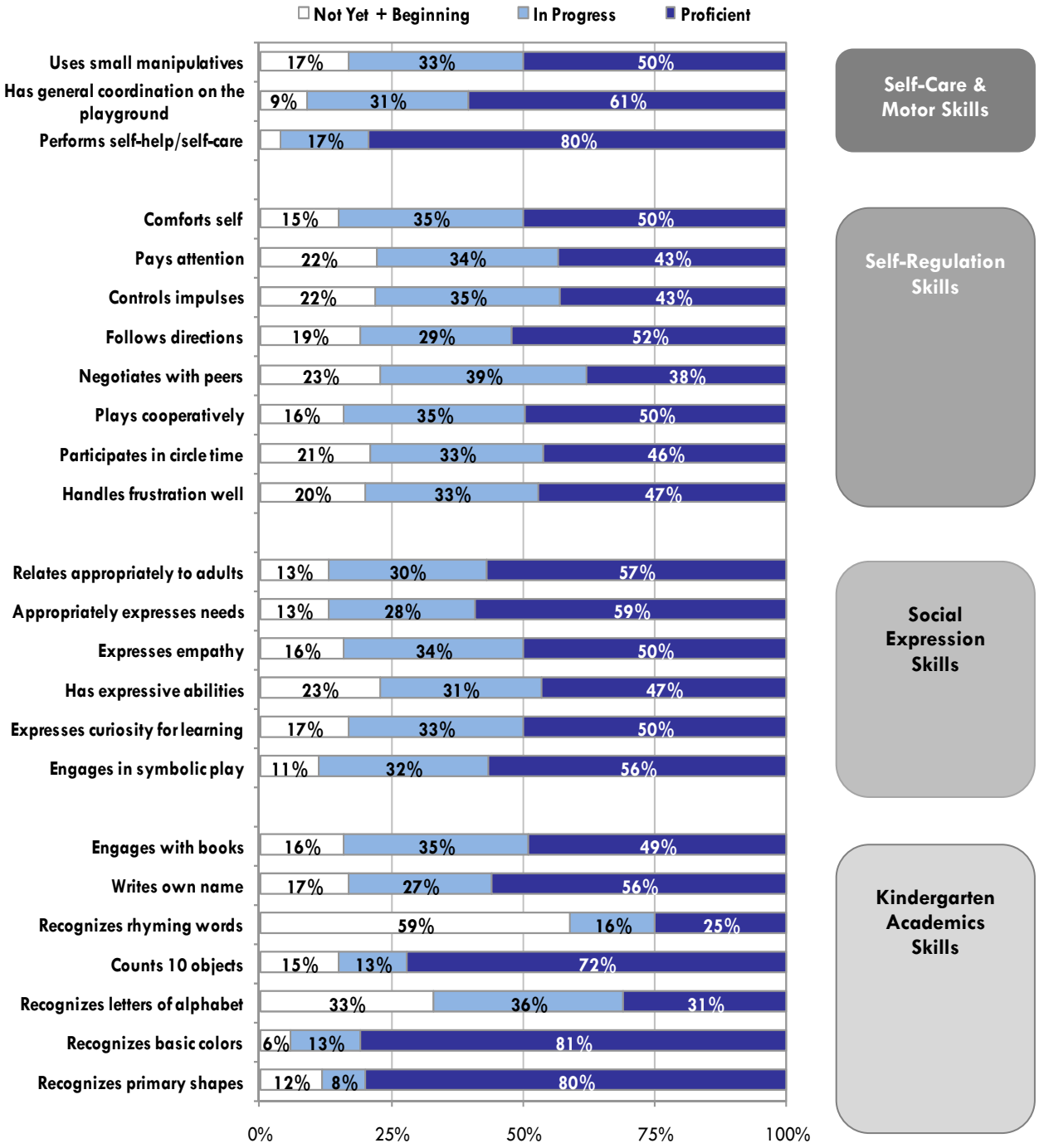
Source: Kindergarten Observation Form I (2010).

Note: Scores are based on 1,383-1,389 students. Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

Proficiency Levels for the 24 Readiness Skills

Figure 54 on the following page shows the students' readiness in greater detail; specifically, it shows the percentage of children at each level of readiness on each of the 24 readiness skills.

Figure 54. **Students' Proficiency Levels Across 24 School Readiness Skills**



Source: Kindergarten Observation Form I (2010).

Note: Percentages are based on 1,274-1,384 students. Don't know/ Not observed responses are not include
Percentages may not sum to 100 due to rounding. Percentages less than five percent are not labeled.

As the figure below shows, students were most proficient on basic self-help and self-care skills, as well as *Kindergarten Academics* skills related to knowing colors and shapes and counting. Students also had good coordination on the playground.

Figure 55. **Students' Top Five Readiness Strengths**

Top five strengths	Basic Building Block	Students' average score (out of 4.00 possible)
1. Performs self-help/self-care	Self-Care & Motor Skills	3.76
2. Recognizes basic colors	Kindergarten Academics	3.74
3. Recognizes primary shapes	Kindergarten Academics	3.65
4. Can count 10 objects	Kindergarten Academics	3.53
5. General coordination on the playground	Self-Care & Motor Skills	3.51

Source: Kindergarten Observation Form I (2010).

Note: Means are based on 1,357-1,383 students. Don't know/ Not observed responses are not included. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

In contrast, students had the greatest needs in their rhyming skills and their knowledge of letters. They were also developing skills in several types of *Self-Regulation* skills, including negotiating with peers, controlling impulses, and staying focused.

Figure 56. **Students' Top Five Readiness Challenges**

Top five challenges	Basic Building Block	Students' average score (out of 4.00 possible)
1. Recognizes rhyming words	Kindergarten Academics	2.26
2. Recognizes letters of the alphabet	Kindergarten Academics	2.92
3. Negotiates with peers to resolve conflicts	Self-Regulation	3.08
4. Controls impulses	Self-Regulation	3.13
5. Stays focused/pays attention	Self-Regulation	3.14

Source: Kindergarten Observation Form I (2010).

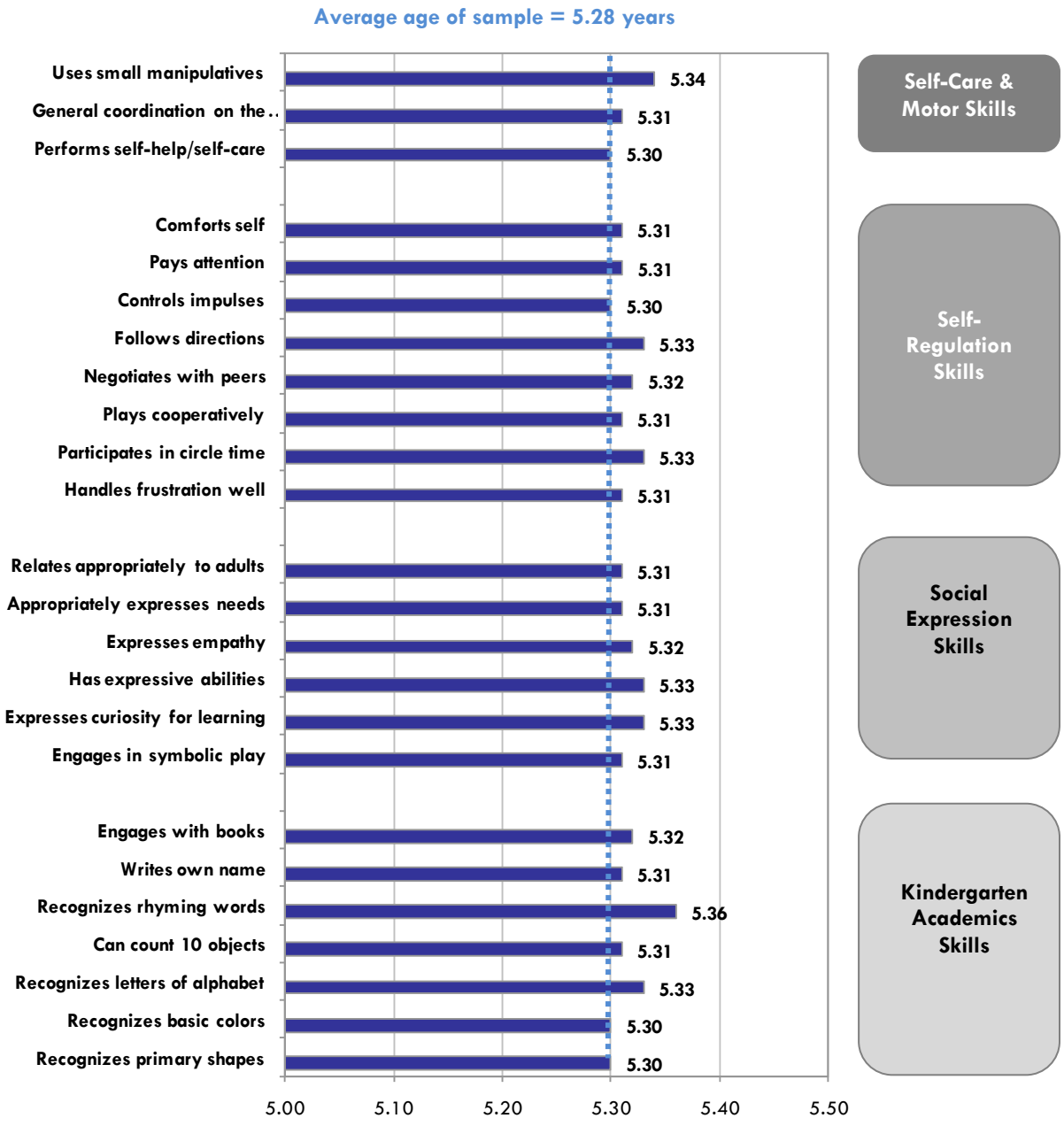
Note: Means are based on 1,274-1,383 students. Don't know/ Not observed responses are not included. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

Age of Those Reaching Skill Proficiency

All measurements of students' readiness at kindergarten entry show that age is a strong predictor of school readiness; older children tend to be more advanced in their readiness skills than younger children. This section explores the relationship between children's age and their readiness levels in greater detail. The average age of students who were rated as "proficient" on each of the 24 readiness skills was calculated and is shown in Figure 57. Recall that the average age of student in the assessment was 5.28 years; as the figure shows, the average age of those proficient in each readiness skill did not deviate very much from this sample average. In fact, for

all but one skill, the average age of those proficient was within one month of the age of the sample overall. Recognition of rhyming words – considered a "stretch" skill for children in this age group, was the skill that had highest average age of students who were proficient in it – they were just over five years and four months old, on average.

Figure 57. **Average Age of Students Who Were Rated as "Proficient" on Each Readiness Skill**



Source: Kindergarten Observation Form I (2010).

Note: Means are based on 318-1108 students who were rated as "Proficient" on the individual skills.

Providing a Context for Understanding Children's Readiness Levels

Although knowing students' skill proficiency levels is instructive for understanding the relative strengths and needs of students, there is still some need to contextualize this information to help answer the question, "How ready is 'ready enough' for school?" To provide some additional context for understanding students' readiness levels, this section discusses the readiness levels of students in the assessment using two different benchmarks: (1) teachers' beliefs about how ready students should be to have a successful transition to kindergarten; and (2) recent research looking at the associations between readiness for school and later success on third grade standardized tests.

Readiness in the Context of Teachers' Beliefs About Proficiency

An important component of the Fall 2010 school readiness assessment in Alameda County involved getting feedback from participating teachers to help contextualize the readiness levels observed in their entering kindergarten students. Teachers filled out a form called the *Teacher Survey on the Importance of Readiness Skills* after they had completed all of their assessment measures. Part of this form included having teachers provide their opinion about the level at which children should be performing on each of the 24 skills to ensure a smooth transition into school. The following figure shows teachers' average scores for the levels of readiness needed for a successful kindergarten transition for each of the 24 skills. As the figure shows, teachers expected children to be most proficient on skills relating to self-help, knowing colors and shapes, and skills related to *Self-Regulation*. Teachers expected the least proficiency from their students in recognizing rhyming words, general coordination, some expressive skills, and negotiating with peers. Teachers also felt that children did not need to have advanced skills in their expressive abilities before starting kindergarten.

Figure 58. **Teachers' Desired Levels of Proficiency Across 24 Readiness Skills**

School Readiness Skills	Basic Building Block	Overall Scores
Performs basic self-help/self-care tasks	Self-Care & Motor Skills	3.77
Recognizes basic colors	Kindergarten Academics	3.41
Recognizes primary shapes (circle, triangle square)	Kindergarten Academics	3.35
Controls impulses and self-regulates	Self-Regulation	3.33
Stays focused/pays attention during activities	Self-Regulation	3.28
Appropriately expresses needs and wants verbally in primary language	Social Expression	3.24
Writes own first name	Kindergarten Academics	3.21
Relates appropriately to adults other than parent/primary caregiver	Social Expression	3.20
Handles frustration well	Self-Regulation	3.19
Follows one- to two-step directions	Self-Regulation	3.18
Comforts self using adult guidance when appropriate	Self-Regulation	3.13
Works and plays cooperatively with peers	Self-Regulation	3.13

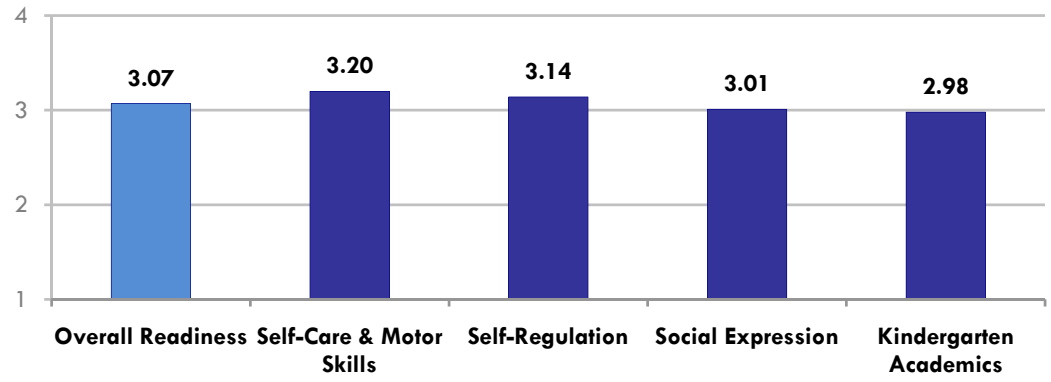
School Readiness Skills	Basic Building Block	Overall Scores
Participates successfully in circle time	Self-Regulation	3.11
Uses small manipulatives	Self-Care & Motor Skills	3.08
Counts 10 objects correctly	Kindergarten Academics	3.04
Expresses curiosity and eagerness for learning	Social Expression	3.03
Engages in symbolic /imaginative play with self or peers	Social Expression	3.03
Engages with books	Kindergarten Academics	2.97
Recognizes letters of the alphabet	Kindergarten Academics	2.82
Negotiates with peers to resolve social conflicts using adult guidance when appropriate	Self-Regulation	2.81
Expresses empathy or caring for others	Social Expression	2.78
Has expressive abilities	Social Expression	2.77
Has general coordination on playground	Self-Care & Motor Skills	2.75
Recognizes rhyming words	Kindergarten Academics	2.03

Source: Teacher Survey on Importance of Readiness Skills (2010).

Note: Scores are based on 78-79 teachers. Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2=just beginning, 3=in progress, 4=proficient.

Teacher ratings of expected proficiency were then summarized overall and for each of the four *Basic Building Blocks* readiness dimensions. On average, teachers felt that students should come into kindergarten with their skills being the most strongly developed in the *Self-Care & Motor Skills* domain. Teachers reported that students needed the least proficiency in their *Kindergarten Academics* skills.

Figure 59. **Average Readiness Levels That Teachers Believed Students Should Have for a Successful Transition to Kindergarten**

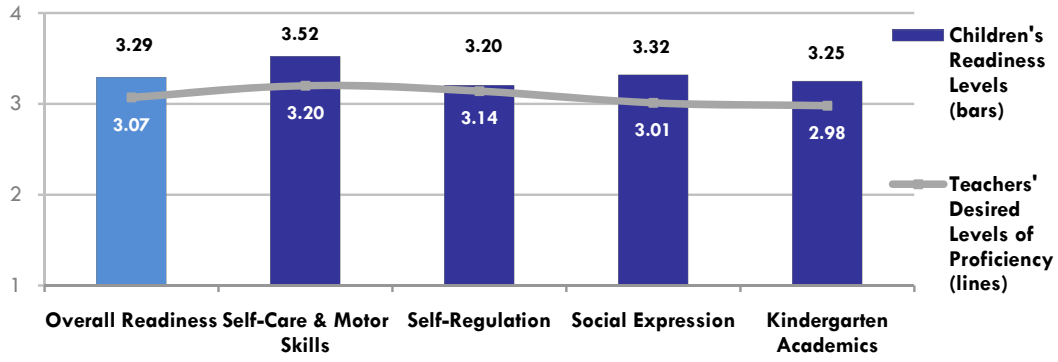


Source: Teacher Survey of the Importance of Readiness Skills (2010). Note: Scores are based on 79 teachers. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

Notably, these expectations do not follow the same pattern as the actual proficiency levels of children; teachers' second highest priority (after *Self-Care & Motor Skills*) is in the area of *Self-*

Regulation skills, but this is the skill area in which students have the lowest scores, on average Figure 60 maps students' observed skill levels on the *Basic Building Blocks* against their teachers' expectations about what their level of proficiency they needed to be school-ready; the bars show students' skill levels and the lines indicate teachers' expectations. As the figure shows, students' average scores exceeded teachers' average skill expectations across all domains of readiness. The smallest margin between students' scores and teachers' expectations occurred for *Self-Regulation* skills; in this domain, students' skill levels were only slightly higher than what their teachers believed they should be for a successful transition to kindergarten.

Figure 60. **Students' Skill Levels in the Context of Teacher Expectations**



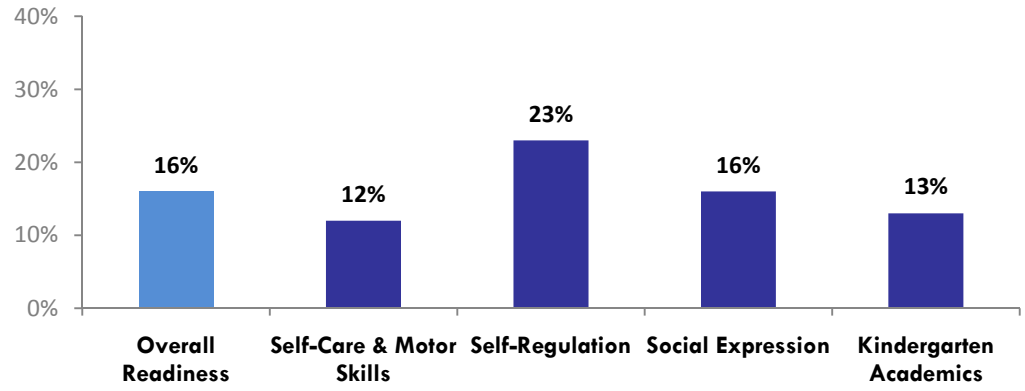
Source: Kindergarten Observation Form I (2010) and Teacher Survey of the Importance of Readiness Skills (2010).

Note: Scores are based on 1,383-1,389 students and 79 teachers. Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient.

Of course, this does not mean that all students were meeting or exceeding the levels of proficiency their teachers felt they should have for a successful school start, and there were some students who were far below these levels. To identify how many students were performing far below the level their teachers felt was needed to be school-ready, children were flagged if their readiness score in each *Basic Building Block* was more than one standard deviation below teachers' desired proficiency levels. (This pulls out only those students whose performance was much lower than what teachers think it needs to be in order to be successful in school.)

The figure that follows shows the percentage of students performing far below teacher expectations in each of the *Basic Building Blocks*. In *Self-Regulation* almost one in four students (23%) was performing far below teacher expectations*; for Self-Care & Motor Skills, Social Expression, and Kindergarten Academics*, between 12% and 16% of students were performing far below the level that teachers felt was necessary to be school ready.

Figure 61. **Percentage of Students Significantly Below Teachers' Proficiency Expectations**



Source: Kindergarten Observation Form I and Teacher Survey on Importance of Readiness Skills (2010). Note: Means are based on 1,383-1,389 students.

Students' Skill Levels in the Context of Teacher Priorities

In addition to teachers indicating the levels of proficiency they believed children should have in order to successfully transition to kindergarten, teachers also reported the following:

- Which five readiness skills they considered to be most important to ensure a smooth transition into kindergarten
- Which five readiness skills were easiest to impact during the course of the school year
- On which five skills they spent most of their time during the school year

When teachers were asked to choose only five skills that they believed were most important for entry into kindergarten, skills from the *Self-Care & Motor Skills and Self Regulation* dimensions of readiness emerged as the most crucial for children to possess. The following figure displays the skills most frequently identified as being important for kindergarten entry (for a complete listing of teachers' selections, please refer to Appendix 7). The most important skill – selected by 72% of teachers – was children's ability to perform basic self-help/self-care tasks. This skill was also the greatest readiness strength of students in this sample (average score=3.78).

Figure 62. **Skills Most Often Selected by Teachers as One of Five Most Important for Kindergarten Entry**

School Readiness Skills	Basic Building Block	Percent of teachers selecting
Performs basic self-help/self-care tasks	Self-Care & Motor Skills	72%
Controls impulses and self-regulates	Self-Regulation	56%
Stays focused/pays attention during activities	Self-Regulation	51%
Writes own first name	Kindergarten Academics	38%
Uses small manipulatives	Self-Care & Motor Skills	34%

Source: Teacher Survey on Importance of Readiness Skills (2010). Note: Scores are based on 79 teachers.

Teachers also chose five skills that they believed to be the easiest for them to impact during the kindergarten year. The most commonly selected skills were from the *Kindergarten Academics* dimension. Three of the skills listed (i.e., counts 10 objects, Recognizes basic colors, and recognizes primary shapes) were readiness strengths of children in this sample. Among teachers surveyed, *Kindergarten Academics* was identified as a skill set that was most malleable to change during the kindergarten year and one that did not need to fully developed at kindergarten entry in order for children to successfully transition to school (see Figure 59).

Figure 63. **Skills Most Often Selected by Teachers as One of Five Easiest to Impact**

School Readiness Skills	Basic Building Block	Percent of teachers selecting
Counts 10 objects correctly	Kindergarten Academics	53%
Recognizes basic colors	Kindergarten Academics	45%
Recognizes primary shapes (circle, triangle square)	Kindergarten Academics	45%
Engages with books	Kindergarten Academics	41%
Writes own first name	Kindergarten Academics	38%

Source: Teacher Survey on Importance of Readiness Skills (2010). Note: Scores are based on 78 teachers. For a complete listing of skills identified as easiest to impact, see Appendix 7.

Finally, teachers prioritized the five skills on which they spent the most class time. The top two skills on which the majority of the teachers agreed they spent most of their time were letter recognition (*Kindergarten Academics*) and staying focused during an activity (*Self-Regulation*). These two skills were among the top five readiness challenges of the students' assessed.

Figure 64. **Skills Most Often Selected by Teachers as One of Five on Which They Spend the Most Time**

School Readiness Skills	Basic Building Block	Percent of teachers selecting
Recognizes letters of the alphabet	Kindergarten Academics	73%
Stays focused/pays attention during activities	Self-Regulation	63%
Engages with books	Kindergarten Academics	38%
Controls impulses and self-regulates	Self-Regulation	37%
Works and plays cooperatively with peers	Self-Regulation	35%

Source: Teacher Survey on Importance of Readiness Skills (2010).
Note: Scores are based on 79 teachers. For a complete listing of skills identified as requiring the most time, see Appendix 7.

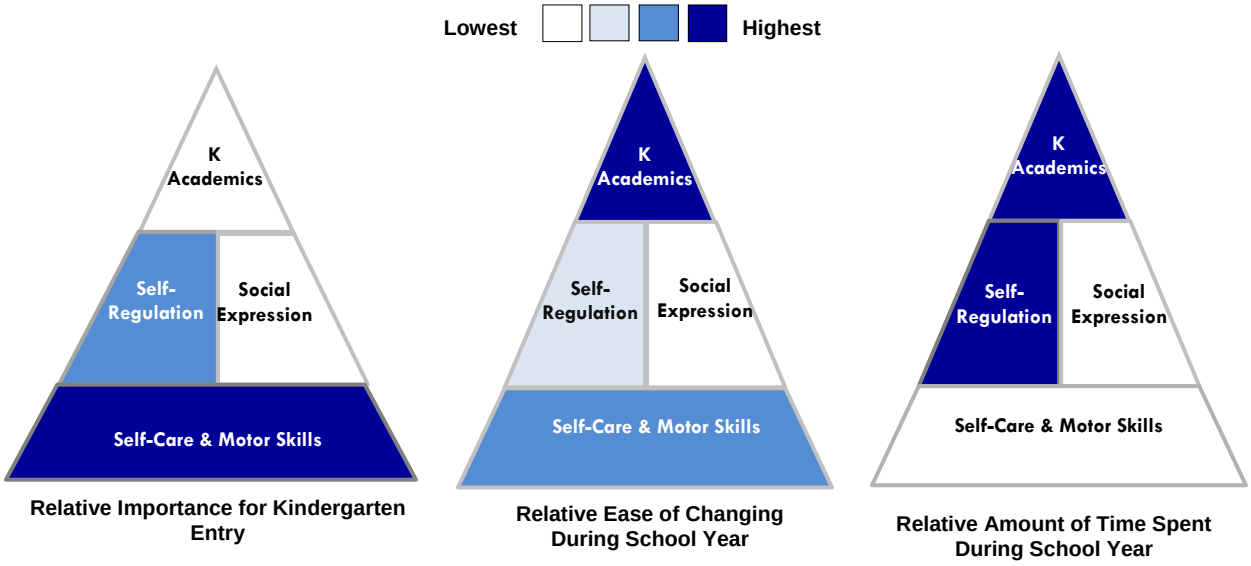
To provide a broader view of teachers' differing priorities, the *Basic Building Blocks* pyramids shown in the following figure are shaded to indicate how the domains are prioritized by teachers. Darker shading is used to highlight dimensions on which teachers placed a higher priority, whereas lighter shading is used to show dimensions on which teachers placed less of a priority. The story told by these pyramids is generally consistent with findings from previous regional assessments. Specifically:

- When thinking about which readiness skills are most important to kindergarten entry, teachers placed the highest importance on *Self-Care & Motor Skills*, followed closely by *Self-Regulation* skills. *Social Expression* and *Kindergarten Academics* are generally seen as the least important skills to have mastered at kindergarten entry.

- The skills that teachers felt were easiest to impact were in the *Kindergarten Academics* domain. *Self-Care & Motor Skills* were perceived as the next easiest to impact, followed by skills in the *Self-Regulation* domain. *Social Expression* skills were selected very infrequently by teachers as being easy to impact.

- Teachers reported spending the most classroom time on skills in two domains: *Self-Regulation* and *Kindergarten Academics.* Teachers were least likely to select *Self-Care & Motor Skills* and *Social Expression* skills as those on which they spend the most class time during the kindergarten year.

Figure 65. **Teacher Priorities for Skill Importance, Ease-of-Changing, and Amount of Time Spent**



Source: Teacher Survey on Importance of Readiness Skills (2010).

Note: Ratings were based on 79, 78, and 79 teachers, respectively. Significant or marginal group differences, according to paired t-tests were as follows: Importance ratings: = Self-Care & Motor Skills > Self-Regulation > (Kindergarten Academics = Social Expression); Ease of Changing ratings: Kindergarten Academics > Self-Care & Motor Skills > Self-Regulation > Social Expression; Amount of Time Spent ratings: (Self-Regulation = Kindergarten Academics) > (Social Expression= Self-Care & Motor Skills).

Readiness in the Context of Long-Term Academic Outcomes

The school readiness levels of students in Alameda County may have implications for their later academic success. A recent longitudinal study was conducted linking school readiness levels measured by the *KOF* I in 2004 in Santa Clara County and 2005 in both Santa Clara and San Mateo counties to the standardized test scores of these same students in the spring of their third grade year (i.e., their English-Language Arts [ELA] and Mathematics California Standards Tests [CSTs]). This research showed that the *Kindergarten Academics* and *Self-Regulation* skills that students possessed at the start of kindergarten strongly predicted their academic performance three and a half years later. More specifically, students who had a combination of strong skills in both *Kindergarten Academics* and *Self-Regulation* were particularly likely to perform well on their third grade tests.

In this longitudinal research:

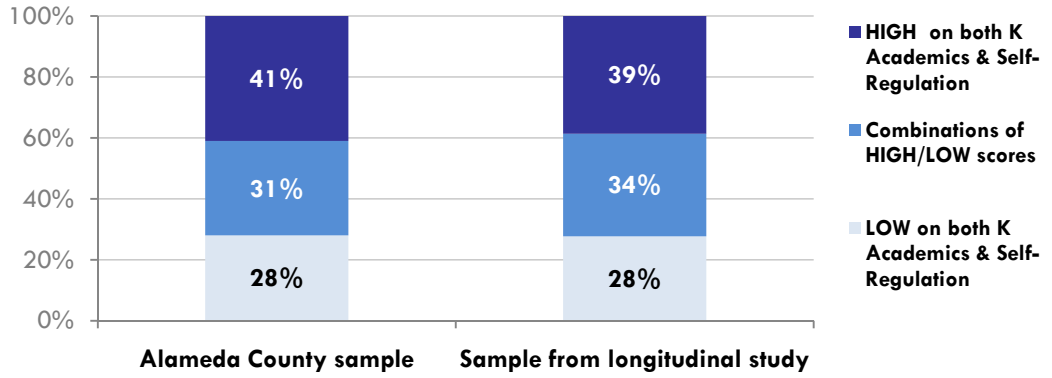
- **Sixty-eight percent** of children who were strong in both the *Kindergarten Academics* and *Self-Regulation* domains of readiness went on to be highly successful in third grade.
- Only **21%** of children who scored low on both *Kindergarten Academics* and *Self-Regulation* skills went on to be highly successful in third grade.[6]

How many entering kindergarten students in 2010 in Alameda County had the readiness patterns that were most strongly related (and least strongly related) to third grade success? The figure that follows shows the proportion of children who had each of the combinations of *Kindergarten Academics* and *Self-Regulation* upon entering kindergarten in Alameda County in Fall 2010. As a source of comparison, the proportion of students in the longitudinal study who fell into each of these classifications is shown as well. (These students were similar to the 2010 Alameda County sample in several domains, including age, income and maternal education levels, percentage of students with special needs, and API level of the schools represented.)

The figure shows that 41% of Alameda County students possessed the combination of *Kindergarten Academics* and *Self-Regulation* skills that is most likely to lead to success on third grade standardized tests. Twenty-eight percent of students had low scores on both their *Kindergarten Academics* and *Self-Regulation* skills, which, among students in the longitudinal study, meant that they had about a one-in-five chance of performing at grade level on their third grade CSTs. The distribution of skills was very similar for Alameda County students and students from the longitudinal sample.

6 "Highly successful"=scoring as Proficient or Advanced on both the ELA and mathematics CSTs in the third grade.

Figure 66. **Proportion of Students with Readiness Skill Predictive of Third Grade Success**



Sources: Kindergarten Observation Form (2010), (2004), (2005).

Note: Sample sizes = 1,386 and 1,334, respectively. Percentages may not sum to 100 due to rounding. Students were classified as scoring high on Kindergarten Academics and Self-Regulation skills if they scored above the longitudinal study mean score in these domains.

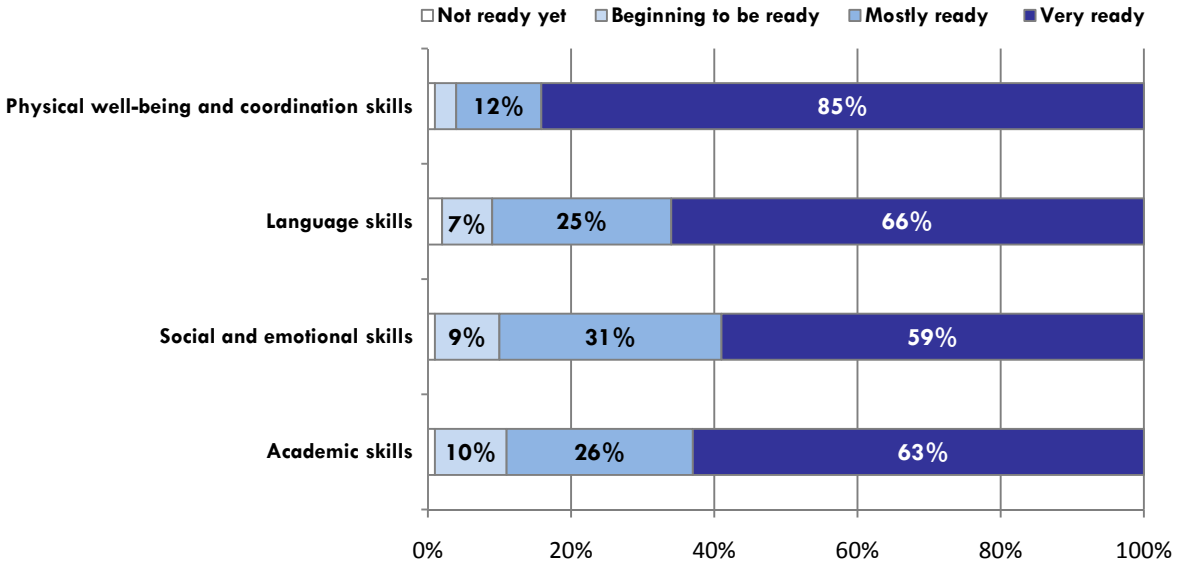
It is important to keep in mind that the longitudinal study was not conducted with students from Alameda County, although they were Bay Area students (San Mateo and Santa Clara counties); in the future, Alameda County hopes to conduct its own study of long-term associations between school readiness and later school success. In addition, even though third grade scores may be associated with children's readiness at kindergarten entry, there are also many other influences that may play into those relationships, including factors related to the districts, schools, classrooms, and teachers that students engage with during their early elementary school grades.

Parents' Perceptions of their Children's Readiness

How ready did parents think their children were for school? On a set of four general types of school skills that loosely correlate with the four *Basic Building Blocks* of readiness, parents were asked to indicate what their child's skill level was, with response options that ranged from "not ready yet" to "very ready."

Parents felt very positively about their children's readiness levels, with perceptions that indicated they believed that their children were more ready than did their children's teachers. Parents reported their children being the most ready on physical well-being and coordination skills, and parents felt that children were the least ready on their social and emotional development.

Figure 67. **Parents' Perceptions of Their Children's Readiness for Kindergarten**



Source: Parent Information Form (2010).

Note: Percentages are based on the following sample sizes (from top to bottom): 1,233, 1,238, 1,235, and 1,238. Percentages less than five percent are not labeled.

Section Summary

Children's overall readiness in 2010 was well above the "In progress" level; their average readiness score was 3.29 on a one to four scale where four was "Proficient." Using the readiness framework that corresponds to the *NEGP*, students were most ready in *Cognition & General Knowledge* skills, and they were least ready in *Communication & Language Usage.* According to the *Basic Building Blocks* groupings of skills, children were most ready on their *Self-Care & Motor Skills*, and they were least ready in their *Self-Regulation* skills.

How ready is "ready enough" for school? To better understand students' readiness levels in the context of their ability to be successful in school, students' skill proficiency levels were compared to the levels of proficiency that their teachers had indicated were necessary for a successful school transition. Across all domains of readiness, students' average proficiency levels exceeded the levels teachers felt they needed to be school-ready. However, a small portion of students had skill levels that were far below the levels teachers felt they needed. The largest percentage of students (23%) were far below their teachers' expectations on *Self-Regulation* skills; between 12% and 16% of students were performing far below the level that teachers felt was necessary to be school ready in *Self-Care & Motor Skills*, *Social Expression*, and *Kindergarten Academics*.

When teachers were asked to describe the relative importance, time spent on, and ability to impact different readiness skills, a dilemma with *Self-Regulation* skills emerged that has been replicated across many readiness studies in Alameda County as well as in other regions. When teachers chose the skills they felt were most important for kindergarten entry, the foundational *Self-Care & Motor Skills* were seen as the most important, followed closely by *Self-Regulation* skills. *Self-Regulation* skills were also the skills that teachers spent the most time on during the

school year, along with *Kindergarten Academics*. *Social Expression* skills were seen as the most difficult to impact during the school year, followed by *Self-Regulation*. In short, *Self-Regulation* is seen by teachers as being important for students' success, but these skills also require substantial time and are perceived by teachers as difficult to impact.

Alameda County students' readiness levels were also examined in the context of recent research linking readiness to third grade outcomes. Findings from this research revealed that students who had a combination of strong skills in both *Kindergarten Academics* and *Self-Regulation* were particularly likely to perform well on their third grade California Standards Tests (CSTs). Based on extrapolations from the findings of the longitudinal study, 41% of Alameda County students had the combination of skills that were most strongly linked to third grade success, and 28% had a combination of skills that was associated with a fairly low probability of third grade success (about a one-in-five probability of performing at grade level on both the English-Language Arts and Mathematics CSTs).

Not surprisingly, parents perceived their children to be more ready for school than teachers had generally reported. However, like teachers, parents typically felt that their children had the strongest skills in physical well-being and coordination, and they had the greatest needs for development of their social and emotional skills.

PART 5

Identifying Portraits of Readiness

Contents of this Chapter:

The previous section provided a broad picture of children's strengths and challenges as they enter kindergarten. However, as any kindergarten teacher well knows, two children can have very different profiles of strengths and needs, even if they enter school with the same average levels of readiness. Whereas one child may be strong in their social-emotional skills but weaker in the academic skills, another child can have exactly the opposite skill pattern.

In an effort to better describe the diversity of children entering school, ASR used a technique called cluster analysis to identify common groupings of children based on their patterns of readiness strengths and needs across the *Basic Building Blocks*. This section describes four common readiness patterns – called the *Readiness Portraits* – and takes a closer look at the characteristics of children who enter school with each readiness profile.

Key Findings:

Portraits of Readiness

- More than half of the students (54%) had readiness profiles showing they were *Strong in all domains* (e.g. *Self-Care & Motor Skills, Self-Regulation, Social Expression,* and *Kindergarten Academics*), and eight percent of students had needs across all readiness domains.
- The rest of the students had mixed patterns of readiness. Thirty percent of students were ready on their *Kindergarten Academics* but were lacking some social and emotional skills, whereas the reverse was true for the remaining eight percent of students who were *Socially/emotionally strong*, but had needs for development in skills related to *Kindergarten Academics*.

Factors Associated with Portraits

- Students who were *Strong in all domains* tended to be older than their peers, they were less likely to be English Learners, and most had attended preschool. They were more likely than their peers to come from families with higher income and education levels, and their parents reported greater engagement and support than did parents of students in other *Readiness Portraits*.
- Students who were *Socially/emotionally strong* (and somewhat less so, *Needs in all domains* students) appeared to have greater needs than students in the other portraits. They had low family income and education levels, were less likely to have been to preschool, were read to less often than other children, and their parents reported less engagement in activities at home. Parents of these students also reported using fewer parent programs and services, and they perceived that they had less support for parenting than did parents of students in the other *Readiness Portraits*.

Identifying Portraits of School Readiness

Section Overview

The previous section provided a broad picture of children's strengths and challenges as they enter kindergarten, including children's general levels of proficiency, their skills in specific readiness domains, and their readiness levels in the context of what kindergarten teachers think are necessary, as well as what skills are most strongly related to long-term school success.

But as any kindergarten teacher well knows, two children can have very different profiles of strengths and needs, even if they enter school with the same average levels of readiness. Whereas one child may be strong in their social-emotional skills but weaker in the academic skills, another child can have exactly the opposite skill pattern. In an effort to better describe the diversity of children entering school, ASR used a technique called cluster analysis to identify common groupings of children based on their patterns of readiness strengths and needs across the *Basic Building Blocks*. This section describes four common readiness patterns – called the *Readiness Portraits* – and takes a closer look at the characteristics of children who enter school with each readiness profile.

Background

In 2004, ASR first introduced four *Readiness Portraits* that captured common patterns of readiness strengths and needs among students entering kindergarten. Since 2004, ASR has validated these four readiness profiles across multiple years of readiness studies in Santa Clara County, San Mateo County, San Francisco County, and in the previous two years of assessments in Alameda County.

In analyzing student data from the Alameda County pilot assessment (conducted in Fall 2008), ASR started "from scratch," exploring whether a cluster analysis of Alameda County students' readiness data would yield the same four patterns of student readiness as had been observed in other regions. These analyses confirmed the same four *Readiness Portraits* as those that emerged in other counties. For the 2010 assessment, ASR applied the algorithm derived from the 2008 data to once again sort students into four *Readiness Portraits*, including students whose readiness levels were characterized by the following patterns:

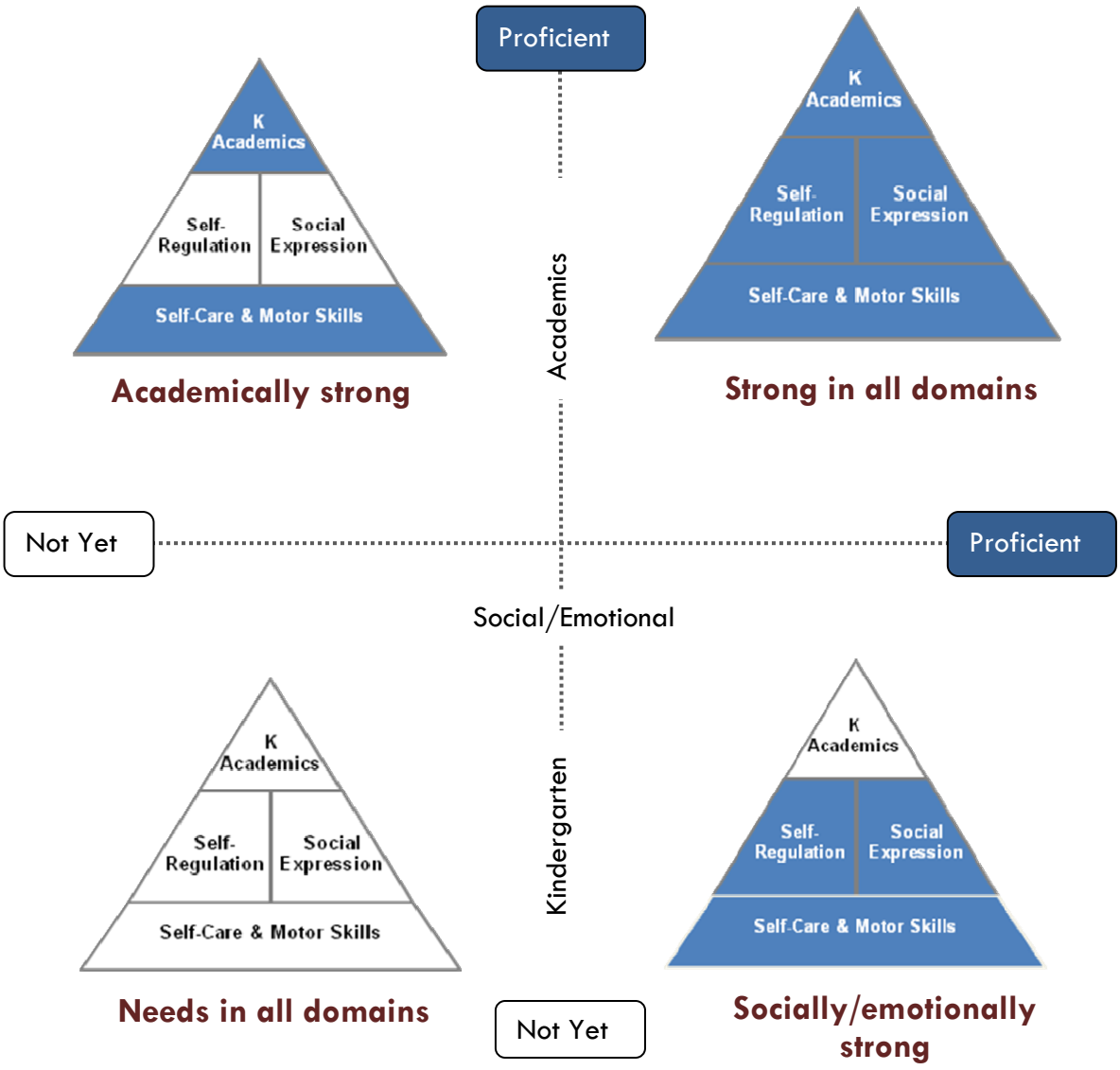
- *Strong in all domains*
- *Needs in all domains*
- *Socially/emotionally strong*
- *Academically strong*

Each portrait reflects a different pattern of developmental strengths and challenges, basic student and family characteristics, and prevalence rates. A complete discussion of the attributes of each portrait follows.

Proficiency Patterns

The dark shading in the figure below shows where children in each portrait are at or near proficiency on the associated skills. *Strong in all domains* students are ready for kindergarten across all dimensions, whereas *Needs in all domains* students need to catch up across all dimensions. The *Socially/emotionally strong* and *Academically strong* student profiles are proficient in some *Basic Building Blocks* but not others. *Socially/emotionally strong* students are skilled when it comes to the foundational *Self-Care & Motor Skills* and critical social-emotional skills, whereas *Academically strong* students are skilled at the nuts and bolts of learning – the *Kindergarten Academics* (as well as *Self-Care & Motor Skills*) – but have more challenges in the social-emotional arenas.

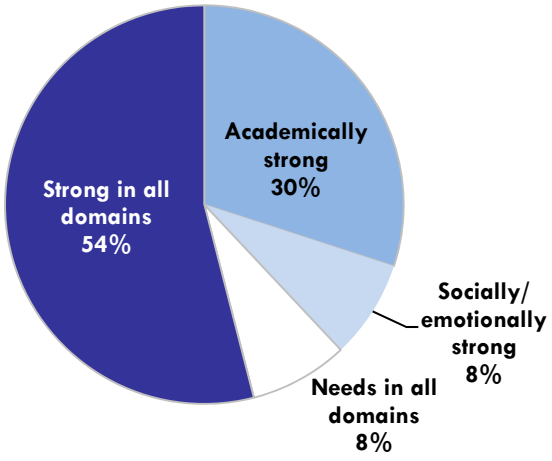
Figure 68. **Four Readiness Portraits**



Prevalence of the *Readiness Portraits* in Alameda County

In Alameda County in 2010, more than half of the sampled students (54%) fell into the *Strong in all domains* profile, entering kindergarten well-rounded across the four dimensions of readiness. Thirty percent of new kindergarten students were *Academically strong* students who were solid on their *Kindergarten Academics* skills (and their *Self-Care & Motor Skills*), but who had some needs for development in their social-emotional skills. About eight percent of new kindergarten students showed the opposite pattern of readiness; these *Socially/emotionally strong* students were close to proficiency on their *Self-Regulation* and *Social Expression* skills (and *Self-Care & Motor Skills*), but had some needs in the area of *Kindergarten Academics* skills. Finally, about eight percent of children sorted into the *Needs in all domains* profile; these children have significant readiness needs across all *Basic Building Blocks.*

Figure 69. **Prevalence of Each Readiness Portrait**



Source: Kindergarten Observation Form I (2010).

Note: This chart is based on 1379 students.

Readiness Scores Across the Portraits

Figure 70 shows the *Basic Building Blocks* scores across the *Readiness Portraits*.[7] For each *Basic Building Block*, *Strong in all domains* students had the highest proficiency scores. They possess the skills needed to focus and manage their behavior in the classroom, their expressive skills are on track, and they are familiar with the basics of kindergarten content. In contrast, *Needs in all domains* students may struggle as they enter school. They are just beginning to build skills in all important areas. *Socially/emotionally strong* and *Academically strong* children score in the middle, with *Socially/emotionally strong* exhibiting social-emotional strengths and *Academically strong* exhibiting strengths in *Kindergarten Academics*, although they are not as strong in these skills as students in the *Strong in all domains* portrait.

[7] NEGP scores by *Readiness Portrait* are available in Appendix 9.

Figure 70. **Basic Building Blocks Scores, by Readiness Portrait**

Basic Building Blocks Scores	Overall	Strong in all domains	Academically strong	Socially/ emotionally strong	Needs in all domains
Base sample sizes	*1,379*	*750*	*409*	*105*	*115*
Self-Care & Motor Skills	3.52	3.83	3.29	3.35	2.42
Self-Regulation	3.20	3.72	2.70	3.05	1.75
Social Expression	3.32	3.81	2.82	3.30	1.89
Kindergarten Academics	3.25	3.60	3.21	2.31	2.08

Source: Kindergarten Observation Form I (2010).

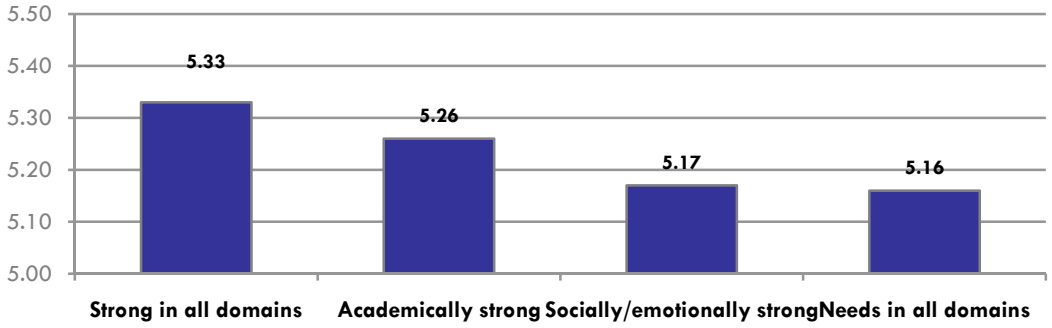
Note: Scale points are as follows: 1=not yet, 2= beginning, 3=in progress, 4=proficient. On all four *Basic Building Blocks*, means for each readiness portrait significantly differed from all other portraits at $p < .001$, according to oneway analyses of variance and follow-up post hoc tests, with one exception: *the Socially/emotionally strong* students and *Academically strong* students had similar levels of *Self-Care & Motor Skills.*

Who Are the Children in Each *Readiness Portrait*?

How do children with a profile of strong readiness across all the skills (*Strong in all domains*) differ from children who had readiness needs across the spectrum of skills (*Needs in all domains*)? This section explores the ways that children from each of the *Readiness Portraits* differed from each other.

As the following figure shows, *Strong in all domains* students were somewhat older than children in the other three readiness portraits, and the *Academically strong* students were in turn older than the *Socially/emotionally strong* students and *Needs in all domains* students. The *Strong in all domains* students were almost one month older than the *Academically strong* students, and two months older than the *Socially/emotionally strong* and *Needs in all domains* students.

Figure 71. **Average Age of Students in Each *Readiness Portrait***



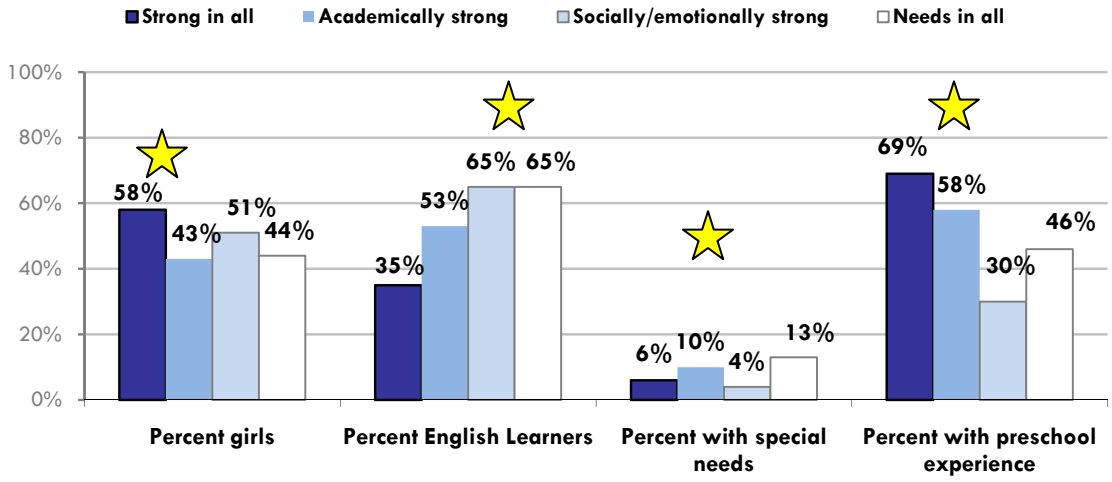
Source: Kindergarten Observation Form I (2010).

Note: Means are based on 742 Strong in all domains, 405 Academically Strong, 102 Socially/Emotionally strong, and 114 Needs in all domains. A oneway analysis of variance indicated that the portraits differed significantly overall ($p < .001$). Post hoc tests revealed the following pattern of group differences: Strong in all domains > Academically strong > (Socially/ emotionally strong = Needs in all domains).

The four *Readiness Portraits* also included different percentages of girls, English Learners, children with special needs, and children with experience in a licensed preschool or childcare

center. The ethnic make-up of students in each portrait differed as well. Figures 72 and 73 that follow displays the differences in these variables across the four *Readiness Portraits*.

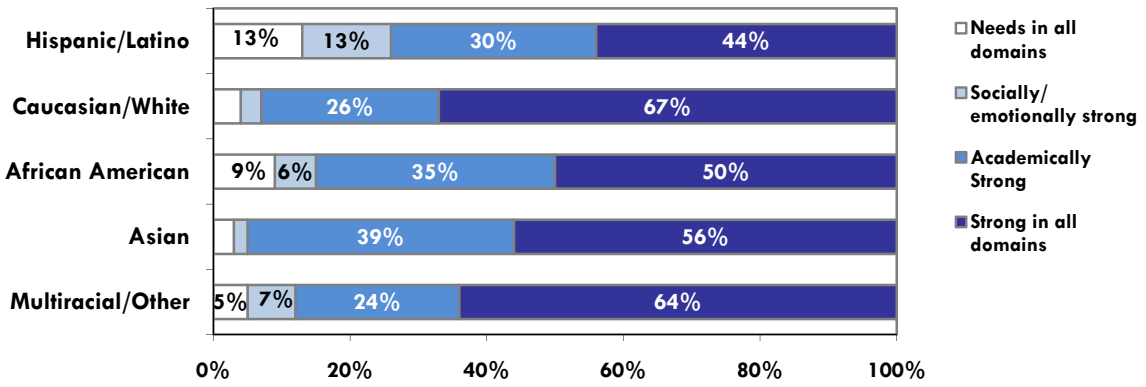
Figure 72. **Student Gender, EL status, Special Needs Status, and Preschool Experience by *Readiness Portrait***



Source: Kindergarten Observation Form I (2010).

Note: Percentages are based on 710-742 Strong in all domains, 384-405 Academically strong, 99-105 Socially/emotionally strong, and 113-115 Needs in all domains students. Yellow stars indicate significant group differences overall, according to chi-square tests ($p < .001$).

Figure 73. **Student Race/Ethnicity, by *Readiness Portrait***



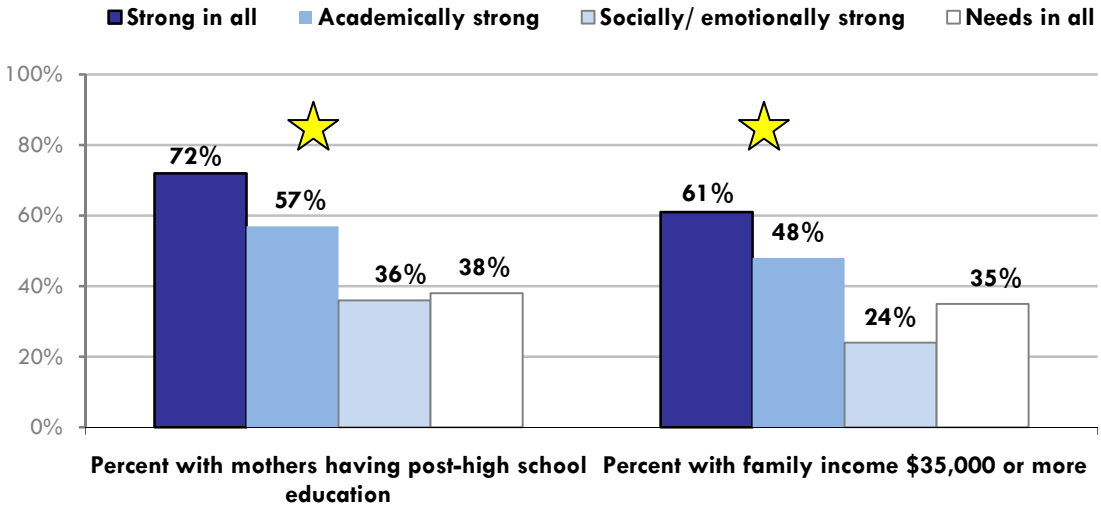
Source: Kindergarten Observation Form I (2010).

Note: Percentages are based on 581 Hispanic students, 356 Caucasian/White students, 139 African American students, 112 Asian students and 161 students of other ethnicities (i.e. multiracial [112], Pacific Islander [25], Native American [2], Other [22]). Percentages may not add up to 100 due to rounding. The overall racial/ethnic make-up of the *Readiness Portraits* was significantly different, according to chi-square tests ($p < .001$).

There were large differences across the *Readiness Portraits* in the percentage of students whose mothers had been educated beyond high school. For example, whereas almost three-fourths (72%) of the mothers of students from the *Strong in all domains* group had been educated beyond high school, only about half as many mothers of the *Socially/emotionally strong* and *Needs in all domains* students had this level of education.

Income levels were also very different across the *Readiness Portraits.* Sixty-one percent of students who were *Strong in all domains* came from families whose incomes were more than $35,000 per year. However, only 35% of students in the *Needs in all domains* group and only 24% of students from the *Socially/emotionally strong* portrait had family incomes that exceeded $35,000 per year.

Figure 74. **Maternal Education Level and Income, by *Readiness Portrait***



Source: Kindergarten Observation Form I (2010).

Note: Percentages are based on 691-728 Strong in all domains, 336-394 Academically strong, 86-100 Socially/emotionally strong, and 86-114 Needs in all domains students. Yellow stars indicate significant group differences overall, according to chi-square tests ($p < .001$).

The family environments of children in the four *Readiness Portraits* were quite different in several ways. Students who were *Strong in all domains* and *Academically strong* tended to be read to more often than *Socially/emotionally strong* students and students with *Needs in all domains*. Parents of *Strong in all domains* students reported more weekly family activities, more engagement in transition activities, and greater levels of parenting support than parents of children in the other groups. Somewhat surprisingly, on many of these dimensions, parents of students in the *Socially/emotionally strong* portrait (and not the *Needs in all domains* portrait) often reported the lowest levels of engagement and support.

Figure 75. **Other Family Environment Characteristics, by *Readiness Portrait***

Characteristics	Strong in all domains A	Academically strong B	Socially/ emotionally strong C	Needs in all domains D
Percent who are read to daily***	33% bCD	28% aCd	12% AB	18% AB
Average number of weekly family activities***	26.94 BCD	23.90 Ad	22.88 A	21.39 Ab
Number of K transition activities (out of 10 possible) ***	4.50 BCD	4.20 ACD	3.36 AB	3.35 AB
Parent programs, services, supports received (out of 9 possible)**	2.99 C	2.81 c	2.44 Ab	2.76
Parent social support (1 to 4 scale) **	3.20 BCd	3.08 Ac	2.89 Ab	3.03 a

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Percentages are based on 686-705 Strong in all domains, 334-348 Academically strong, 86-91 Socially/emotionally strong, and 84-92 Needs in all domains students. Significant differences according to appropriate statistical tests (chi-square tests or oneway ANOVAs) are indicated as follows: ** $p < .01$; *** $p < .001$. Lower-case letters below the mean scores and percentages signify which means are significantly (upper case) or marginally (lower case) different from one another according to post hoc tests. For example, the "b" beneath the *Strong in all domains* percentage for "Percent who are read to daily" (33%) means that this percentage differs marginally ($p < .10$) from the percentage among *Academically strong* students (28%; Column B). The upper case "C" in the same cell means the percentage is significantly different from that of the *Socially/emotionally strong* students (12%; Column C).

Section Summary

Data revealed that more than half of students (54%) had readiness profiles showing they were *Strong in all domains*, and eight percent of students had needs across all readiness domains. The rest of the students had mixed patterns of readiness. Thirty percent of students were ready on their *Kindergarten Academics* but were lacking some social and emotional skills, whereas the reverse was true for the remaining eight percent of students who were *Socially/emotionally strong*, but had needs for development in the *Kindergarten Academics* skills.

Students who were *Strong in all domains* tended to be older than their peers, they were less likely to be English Learners, and most had attended preschool. They were more likely than their peers to come from families with higher income and education levels, and their parents reported greater engagement and support than parents of students in other *Readiness Portraits*. Students who were *Socially/emotionally strong* (and somewhat less so, *Needs in all domains* students) appeared to have greater needs than students in the other portraits. They had low family income and education levels, were less likely to have been to preschool, were read to less often than other children, and their parents reported less engagement in activities at home. Parents of these students also reported using fewer parent programs and services, and they perceived that they had less support for parenting than parents of students in the other *Readiness Portraits*.

PART 6

Student and Family Factors Associated with School Readiness

Contents of this Chapter:

This section discusses the results of regression analyses used to identify which child and family factors were most predictive of children's readiness for school.

Key Findings:

Predictors of Readiness

- The strongest predictor of readiness was students' basic well-being. Although there were few children who were frequently seen by teachers as being hungry, tired, or ill, students with these issues had readiness levels that were significantly below those of their peers.

- In addition, students who had no special needs, were older, were not English Learners, were girls, were not born with a low birth weight, and came from families with higher education levels entered school more ready than their peer without these characteristics.

- Some significant predictors of readiness in this study suggest fruitful avenues for future community intervention:
    - Preschool experience was associated with enhanced readiness (although analyses suggest this may not extend to *Self-Regulation* development in this sample), as was having a parent who received specific information about how ready their child was for school.
    - Children of parents who had more positive parenting attitudes were also more ready for school. This association was driven by enhanced readiness only in social and emotional domains.

Student and Family Factors Associated with School Readiness

Section Overview

Information about readiness in the previous two report sections has focused on describing what is – the readiness levels of students overall and in different skill domains, readiness in the context of different standards, and different common patterns of readiness strengths and needs among entering students. In these descriptions, some comparisons are included as well, such as looking at which student characteristics are associated with being in a *Strong in all domains* student versus a *Needs in all domains* student. Although this univariate approach – looking at one variable at a time – is critical to understanding which students are more (and less) ready for school, univariate analyses cannot inform us about how several variables interact together to influence readiness scores. To gain a better understanding of the underlying reasons children may be more or less prepared for school, readiness must be examined using a multivariate approach.

This section uses regression analyses to examine the factors that are most strongly associated with enhanced readiness levels **after ironing out differences on a wide range of other family, student, and school-level factors.** This allows us to draw conclusions which factors are independently associated with readiness — above and beyond their associations with other factors. For example, from the previous report sections, we know that as family incomes increase, so does the likelihood that a child has attended preschool. So, if we find associations between income level and readiness, without a regression analysis, it is difficult to know whether higher income or greater likelihood of preschool experience is responsible for those enhanced readiness levels. Regression analysis allows us to look at each of the associations between readiness and each factor while simultaneously taking the other into account.

Regression analysis results in a set of what are called "beta coefficients." 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 readiness. All coefficients can be compared to one another to determine their relative strengths. A coefficient of .40, for example, is twice as strong as a coefficient of .20.

It is important to keep in mind that regression analyses can provide a glimmer of why children vary, but these are ultimately correlational — not causal — analyses. The only way to truly determine what causes increased readiness is by conducting a well-controlled experiment. It is also important to note that there are likely many other variables that could affect readiness that are beyond the scope of this assessment. Variables like temperament, intelligence, and style of attachment to parents/guardians, for example, are not measured in this study, but may play an important role in children's readiness for school.

Factors Associated with Overall Readiness

The readiness predictors for Alameda County students that were included in the multivariate analyses were as follows:

- **Child variables:** Child's age at enrollment, gender, special needs status, and English Learner status
- **Family background variables:** Income and maternal education level
- **Child health variables:** Child well-being (frequency of being hungry, tired, or ill), child absences and tardies, low birth weight and having a regular medical provider
- **Family stressors, parenting attitudes, and parenting support:** Index of family risk (including being a teen mother, being a single parent, having lost a job in the last year, having moved frequently since the child was born, and having few parent supports); parenting attitudes; sum of local family resources used (7 possible); parental social support, and an index of life concerns
- **Direct school readiness-related variables:** Preschool attendance, attendance at F5AC's Summer Pre-K, frequency of home reading, sum of kindergarten preparation activities in which parents had engaged (10 possible), parents' receipt of general information about readiness, parents' receipt of specific information about their own child's readiness

In addition, a few variables were added into the regression equation to control for any additional influence they might have on readiness scores. These included the number of days between school start date and observation date, whether children were in a full or half day kindergarten classroom, teachers' experience level, teachers' expectations about the readiness levels children need to be successful, and school API level.

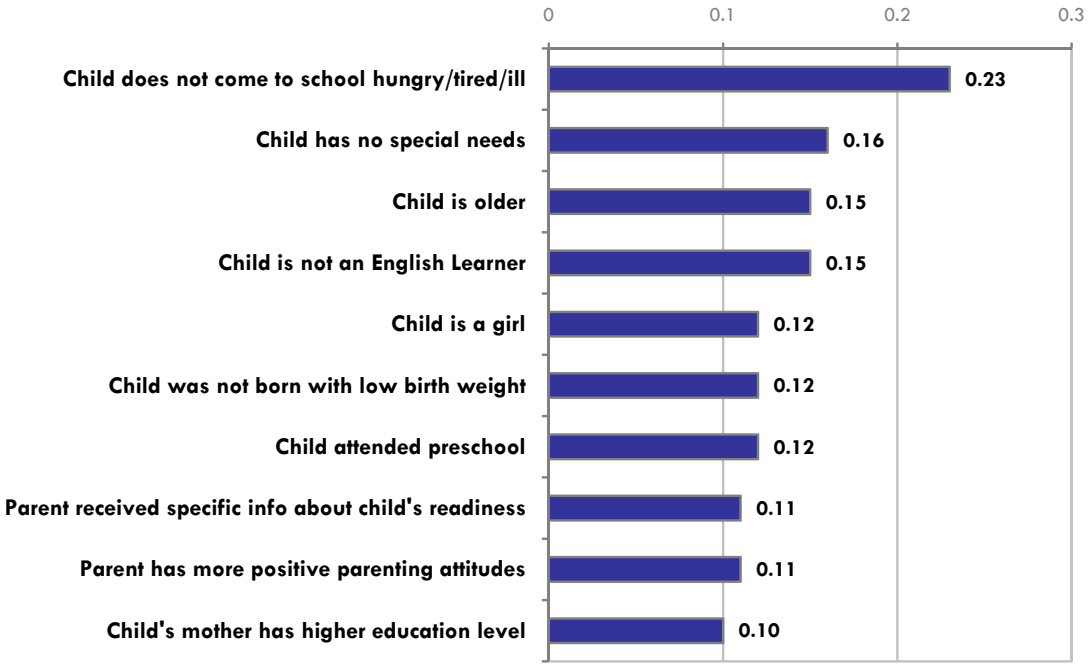
Figure 76 shows the results of this regression analysis; depicted are those factors that are significantly related to overall kindergarten school readiness after taking into account all of the other variables. Regression results indicated that 10 factors explained 33% of children's readiness scores. The strongest predictor of readiness was students' well-being. Although there were relatively few children who had such issues, those who were perceived by their teachers to be frequently hungry, tired, or ill had readiness levels that were much lower than their peers without well-being concerns.

Several demographic and child-level characteristics also emerged as strong predictors of readiness. Students who did not have special needs were more ready for school than those who did have special needs. Older students had higher levels of readiness than younger students, and those who were not English Learners were generally more ready than were English Learners. Girls also tended to be more ready for school than boys. As has been seen in other school readiness research, children who were born with a low birth weight were slightly behind their peers when they entered school, as were children whose mothers had lower education levels.

There were also several predictors of readiness that point to opportunities for potentially fruitful community-level interventions. Students who had attended preschool were more ready

for school than students who had not, and students whose parents had received specific information about their child's readiness for kindergarten were more ready than those whose parents had not received such information. Finally, students of parents who had more positive attitudes about parenting – as measured by reports of less frequent experiences of parenting-related negative feelings– had higher readiness levels than students whose parents had more negative parenting attitudes.

Figure 76. **Relative Strength of Factors Significantly Associated with Overall School Readiness**



Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Values for each factor listed above represent standardized beta coefficients that were significant at $p < .05$. For a full listing of all variables entered into the model, see text. The overall regression model was significant, $F = 21.46$, $p < .001$, explaining 33% of the variance in kindergarten readiness ($R^2 = .34$; Adj. $R^2 = .33$).

Factors Associated with Each *Basic Building Blocks* Dimension of Readiness

The previous figure shows the factors that were associated with overall readiness scores. To see how each individual *Basic Building Block* readiness dimension was related to the different factors, ASR performed a regression on each skill dimension, using the same set variables described previously. Figure 77 shows which factors emerged as significant predictors of each *Basic Building Block*. The figure also displays how much of the readiness dimensions were explained by the predictors (as indicated by the R^2 and adjusted R^2 statistics at the bottom of the table).

Some interesting trends emerge when the significant predictors are compared across the *Basic Building Blocks*. A few variables significantly predict all of the *Basic Building Blocks*, e.g., greater child well-being, not having special needs, being older, and not having been born with a low birth weight. However, it is noteworthy that in this sample, preschool experience was a strong predictor of all the *Basic Building Blocks* except *Self-Regulation*. It is also interesting that positive parenting attitudes appear to be related to progress only in the social and emotional dimensions

of children's readiness, but not in their *Self-Care & Motor Skills* or in their *Kindergarten Academics*. In addition, in this sample, family income was a significant predictor of *Kindergarten Academics*, but not any of the other readiness domains.

Figure 77. **Beta Weights of Factors Significantly Associated with the *Basic Building Blocks* of School Readiness**

Predictors	Overall Readiness	Self-Care & Motor Skills	Self Regulation	Social Expression	Kindergarten Academics
Is not frequently hungry, tired or ill	.23	.21	.26	.18	.12
Has no special needs	.16	.14	.16	.17	.10
Is older	.15	.17	.11	.11	.17
Not an English Learner	.15			.23	.16
Is a girl	.12	.11	.16	.10	
Not born low birth weight	.12	.11	.12	.10	.10
Preschool experience	.12	.18		.09	.16
Parent received info about child's readiness	.11		.11	.10	.09
Positive parenting attitudes	.11		.15	.09	
Higher maternal education level	.10			.11	.14
Higher family income					.11
Overall R^2/Adjusted R^2	.34/.33	.24/.22	.28/.26	.28/.26	.35/.34

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Factors with a beta weight listed were significant predictors of readiness when all other variables were simultaneously entered into the model at $p < .01$. The regression models for all the *Basic Building Blocks* and overall readiness were statistically significant at $p < .001$.

Section Summary

Ten factors explained 33% of entering 2010 kindergarteners' readiness scores in Alameda County. The strongest predictor was students' basic well-being. Although there were few children who were frequently seen by teachers as being hungry, tired, or ill, students with these issues had readiness levels that were significantly lower than those of their peers. In addition, students who had no special needs, were older, were not English Learners, were girls, were not born with a low birth weight, and came from families with higher education levels entered school more ready than their peer without these characteristics.

Some significant predictors of readiness suggest fruitful avenues for future community intervention. Preschool experience was associated with enhanced readiness (although analyses suggest this may not extend to *Self-Regulation* development in this sample), as was having a parent who received specific information about how ready their child was for school. Children of parents who had more positive parenting attitudes were also more ready for school, although analyses looking more specifically at each readiness domain revealed that this association was found only in the social and emotional readiness domains.

PART 7

Participation in F5AC Programs and Readiness

Contents of this Chapter:

Promoting school readiness is a key objective of many First 5 Alameda County (F5AC) programs and services for children and families. This section explores the following research question: To what extent is exposure to F5AC programs and services associated with children's readiness for school?

Key Findings:

F5AC Recipients Are a High Need Population

- Compared to non-recipients, those who received F5AC services were more likely to have been from families that included teen mothers and single parents, had lower incomes and education levels, engaged in fewer family activities and used less community resources such as parks and libraries, and felt they had less social support for their parenting needs.

Associations between Program Participation and Readiness Outcomes

- Two F5AC programs were associated with enhanced school readiness outcomes for children:
  - *Summer Pre-Kindergarten (SPK):* After controlling for demographic differences, results revealed that SPK students were more ready for school than children with no preschool experience in all areas except *Kindergarten Academics*, in which there was a trend for enhanced readiness in SPK students that did not reach statistical significance. The adjusted readiness scores of the SPK students were similar to those of students with a full preschool experience in all domains but *Kindergarten Academics.* In this skill area, preschooled students maintained a significant advantage
  - *Intensive Family Support Case Management*: A comparison between participants and non-participants revealed that participants had higher levels of overall readiness for school, driven by marginally higher levels of proficiency in *Self-Regulation* skills and *Social Expression* skills.
- Three F5AC programs that only indirectly targeted school readiness were not found to be associated with enhanced readiness outcomes:
  - *Post-partum visits*: No significant differences were found between the readiness outcomes of participants and non-participants
  - *Pediatric Development Screening Support*: After adjusting for sample differences, participants were still somewhat less ready in the area of *Kindergarten Academics* than non-participants.
  - *Preschool with Mental Health Consultations*: Participation in this program was defined as attending a preschool classroom in which a teacher had received consultation (e.g., direct services were not necessarily provided to the child). After controlling for sample differences, participants still were somewhat behind their peers in *Self-Regulation*, and they had marginally lower levels of overall readiness than non-participants.

Special Section: A Closer Look at Participation in F5AC Programs and School Readiness

Section Overview

One of the key outcomes of F5AC is that children enter school ready to learn, and many of the F5AC-funded programs expect to impact school readiness in the short or long term. Consequently, a key research question examined in this assessment was the following: To what extent is exposure to F5AC programs and services associated with enhanced school readiness? This section delves further into this question, first examining who received F5AC services and then providing a more comprehensive analysis of the readiness levels of F5AC program recipients, with a special focus on F5AC's Summer Pre-K program.

Description of F5AC Programs and Participants

F5AC provided database records for participants in a subset of their funded programs in which enhanced school readiness is a short- or long-term outcome. These data were merged with data collected in the school readiness study to: (1) identify those readiness study participants who had also received F5AC intervention(s); and (2) compare their demographic and socioeconomic characteristics, family environments, early education experiences, and readiness levels to those of their peers who had not received F5AC services. The "Methodology" section of this report describes that matching process in greater detail; in sum, that effort led to 301 matches to the F5AC database. In other words, 22% of the consenting families who participated in the readiness study had been touched by one or more of the F5AC programs targeted for examination in this study.

The five F5AC programs to which students in the assessment sample were able to be matched included the following:

- **Summer Pre-K:** This program is a five-to-six week Summer Pre-K program for children with no prior preschool or licensed childcare experience. The program is designed to provide children with an opportunity to learn in a developmentally appropriate classroom environment and expose them to social experiences and develop various skills necessary for success in kindergarten. Parents and children are introduced to the school setting, easing the transition to kindergarten. Parent workshops are also provided through this program, as are developmental screenings if a teacher or parent sees a need for them (105 matches to readiness study participants).

- **Post-partum home visits:** This program includes up to three home postpartum visits for medical/weight checks, basic anticipatory guidance for parents, and resource referral (161 matches).

- **Preschool with Mental Health Consultations:** Preschool teachers receive consultation from mental health specialists on classroom management and addressing challenging behaviors (22 matches).

- **Pediatric Development Screening Support - Healthy Steps**: This program provides developmental screening of children referred for potential development concerns (20 matches).

- **Intensive Family Support Case Management:** The programs included in this set provide up to three years of home-based case management, depending on the specific program. The programs target populations at very high social and/or medical risk (e.g., infants discharged from NICU, children of teen parents, families with calls to Child Protective Services). Case management focuses on caregiver-child relationships, maternal depression and developmental screenings, and providing parents with support in navigating community resources. There were a total of 25 cases matched overall, with three children who had participated in multiple programs. Matches for each specific program is as follows:

  - Special Start: 12 matches
  - Pregnant and Parenting Teens: seven matches
  - Another Road to Safety: three matches
  - Public Health Nursing home visiting (not including postpartum): four matches
  - Children's Hospital of Oakland home visiting: two matches

Figure 78. **Summary of Matches between F5AC Programs and Students in Readiness Assessment**

F5AC Program	Number matched	Percent of sample
Summer Pre-K	105	8%
Post-partum visits	161	12%
Pediatric Development Screening Support	20	1%
Preschool with Mental Health Consultations	22	2%
Intensive Family Support Case Management	25	2%
Total (matched to one or more of above programs)	301	22%

Source: ECChange database, January, 2010.

Note: Sample size = 1,394.

What county regions were most represented among the students who had received F5AC services? As the following figure shows, more than one in four (29%) of those served by F5AC were from the San Lorenzo Unified School District region. About one in four (24%) were from Hayward Unified, and 20% were from Oakland Unified. Almost no students from Castro Valley, Emery, or Pleasanton Unified School District had received First 5 services.

Figure 79. **School Districts of Students Served by F5AC Programs**

School District	Percent of F5AC program participants
Berkeley Unified	12%
Castro Valley Unified	3%
Emery Unified	2%
Hayward Unified	24%
Livermore Valley Joint Unified	8%
Oakland Unified	20%
Pleasanton Unified	1%
San Lorenzo Unified	29%
Total	100%

Source: Kindergarten Observation Form I and ECChange data (2010).

Note: Sample size = 1,394.

To better understand the characteristics of the children and families who were served by F5AC, analyses divided the kindergarten sample into those who did versus did not receive one or more of these F5AC interventions. As Figure 80 reveals, the group of families receiving F5AC services was a high-need group, as demonstrated by socioeconomic risks as well as indications of lower levels of family engagement and interpersonal support than among families not served by F5AC. For example, as compared with non-recipients, children and families who received F5AC services:

- Were more likely to have a mother who gave birth to the child as a teen
- Were more likely to come from a single parent household
- Were less likely to have a mother who was educated beyond high school
- Were less likely to have a family income of $35,000 per year or more
- Engaged in fewer weekly family activities
- Used fewer community resources, such as parks, museums, and libraries
- Had engaged in fewer kindergarten transition activities
- Had less social support for their parenting needs

The two groups of families did appear to be similar in their use of parenting services and supports; in fact, perhaps reflecting the community connections that F5AC had provided to them, program recipients used slightly more of these services than non-recipients (although this was not a statistically significant difference).

Figure 80. **How Do F5AC Program Recipients Differ from Non-Recipients?**

Child/Family Characteristics	Non-recipients	Recipients
Teen mom***	6%	14%
Single parent***	20%	30%
Lost job last year	26%	25%
Mother has post-high-school education***	67%	47%
Household earns $35,000 or more/year***	59%	30%
Number of addresses since child's birth	1.99	2.05
Number of weekly family activities*	25.77	23.92
Community resources used (out of seven possible)***	2.84	2.33
Number of K transition activities (out of 10 possible)*	4.31	3.92
Parent programs, services, supports received (out of 9 possible)	2.86	2.96
Average parenting social support (1 to 4 scale)**	3.16	2.99

Source: Kindergarten Observation Form I and Parent Information Form (2010).

Note: Sample sizes range from 908-976 for F5AC non-recipients and 251-272 for recipients. Significant differences according to chi-square tests or t-tests are indicated as follows: * $p < .05$; ** $p < .01$; *** $p < .001$.

F5AC Program Participation and Readiness

Was exposure to F5AC programs and services associated with greater school readiness? For each of the five F5AC programs listed in Figure 78, the readiness levels of children who had been in the program were compared to the readiness levels of children who had not been in any F5AC programs, after adjusting for the different demographic and socioeconomic characteristics of the two groups. The results of those analyses are described below (and in Figure 81 on pg.88), with a more comprehensive analysis of the Summer Pre-K Program – which has the greatest relevance among all the programs to readiness outcomes – discussed at the end of this section.

Post-Partum Home Visits

Analyses comparing post-partum home visit recipients to children who had not received any F5AC services did not show any school readiness benefits associated with participation in this program. After adjusting for sample differences, the children who received these post-partum home visits had readiness levels that were very close to those of children who had not been in the program (see Figure 81).

Pediatric Development Screening Support

Analyses comparing recipients of developmental screening services to children who had not received any F5AC services also showed no evidence of school readiness benefits associated with participation in this program. In fact, even after adjusting for sample differences, the children who received screening support were slightly behind in their readiness levels relative to

children who had not received services. For the *Kindergarten Academics* readiness dimension, children who had been in this program were still significantly behind their peers in their readiness (see Figure 81).

Preschool with Mental Health Consultations

Participation in the Preschool with Mental Health Consultations program was somewhat less direct than the other programs, in that participation in the program is defined by having been in a preschool classroom in which the teacher received consultation from mental health specialists on classroom management and addressing challenging behaviors. As such, even if children are identified as having been in the program, it is possible that they might not have received any direct intervention from it. Based on comparisons of the readiness levels of students in this program versus other students, the program's impacts on student readiness are difficult to detect. Even with adjustments to correct for sample differences, these children had marginally lower overall readiness levels, and their readiness in *Self-Regulation* skills was significantly lower than that of their peers who had not been in F5AC programs prior to kindergarten (see Figure 81).

Intensive Family Support Case Management

In contrast to the other programs described, analyses looking at children who took part in one of the five F5AC programs offering intensive case management revealed promising trends for enhanced readiness outcomes. Compared to their peers who were not exposed to F5AC programs, those who had been in the Intensive Family Support Case Management programs had marginally higher levels of overall readiness, which was driven by marginally higher levels of *Self-Regulation* and *Social Expression* skills in particular. (Levels of *Kindergarten Academics* and *Self-Care & Motor Skills* were slightly higher as well, but differences were not as large; see Figure 81).

Figure 81. **Do Readiness Levels of F5AC Program Recipients Differ from Those of Non-Recipients?**

F5AC Program	Overall Readiness	Self-Care & Motor Skills	Self-Regulation	Social Expression	Kindergarten Academics
Post-Partum Visits	No diff	No diff	No diff	No diff	No diff
Pediatric Development Screening Support	No diff	No diff	No diff	No diff	− Ppts have significantly lower readiness than non-ppts
Preschool with Mental Health Consultations	− Ppts have marginally lower readiness than non-ppts	No diff	− Ppts have significantly lower readiness than non-ppts	No diff	No diff
Intensive Family Support Case Management	+ Ppts have marginally higher readiness than non-ppts	No diff	+ Ppts have marginally higher readiness than non-ppts	+ Ppts have marginally higher readiness than non-ppts	No diff

Source: Kindergarten Observation Form I (2010).

Note: Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2=just beginning, 3=in progress, 4=proficient. Scores are based on 155-156 post-partum visits program participants and 1045-1047 non-participants; 19-20 PDSS program participants and 1045-1047 non-participants; 20-21 Preschool with Mental Health Consultations program participants and 1045-1047 non-participants; 25 Intensive Family Support Case Management program participants and 1045-1047 non-participants. Significance levels for differences in mean scores are indicated above, according to analyses of covariance, with control variables noted in regression section, as well as basic demographics and SES variables: Maternal education, income, sex, age, and EL status. See Appendix 10 for adjusted means.

Do Children Who Attend the Summer Pre-K Program Show Enhanced Readiness Skills?

The mixed findings for the programs described so far are not entirely unexpected. For example, the postpartum home visiting program includes up to three home visits after a woman gives birth, which ensures the healthy development of the infant, supports the mental health needs of the mother, and connects the family to resources they may require. Because the program is of relatively low intensity and the intervention occurs immediately after childbirth, it is not surprising that this study is not able to detect its impact – even though there may be positive programs effects occurring in other outcomes and over a long period of time. Alternatively, the Intensive Family Support Case Management programs – which are of longer duration and provide many more services to families – have greater potential to show impacts on readiness levels at kindergarten entry.

Moreover, for a program like the F5AC Summer Pre-K (SPK) program, the connection between the services delivered and the expected impacts on readiness are even closer than for the other

F5AC programs examined, both in time and in relevance. Not only does the SPK program operate in the weeks immediately preceding the start of kindergarten, its primary purpose is to promote readiness in students without other exposures to high-quality early education. Because of this, the SPK program is the best candidate among the set of F5AC programs to demonstrate strong associations with enhanced readiness levels in students.

With this in mind, ASR examined the following questions:

- How do the readiness levels of children who participated in F5AC's SPK program compare to those of children who did not have any preschool experience?
- How do children who participated in the F5AC SPK program compare to children who had a longer-term early education experience in a preschool or a licensed childcare center?

ASR used analysis of covariance techniques to examine average readiness levels of participants in F5AC's SPK program. To conduct this analysis, children were divided into three groups: (1) those without preschool experience of any kind; (2) those who were verified through the F5AC database as having attended the Summer Pre-K program; and (3) those who had a longer-term preschool experience in a licensed preschool or childcare center, including Head Start, State Preschool or private programs. ASR compared the three groups on their overall readiness levels, as well as each of the individual *Basic Building Blocks*.[8]

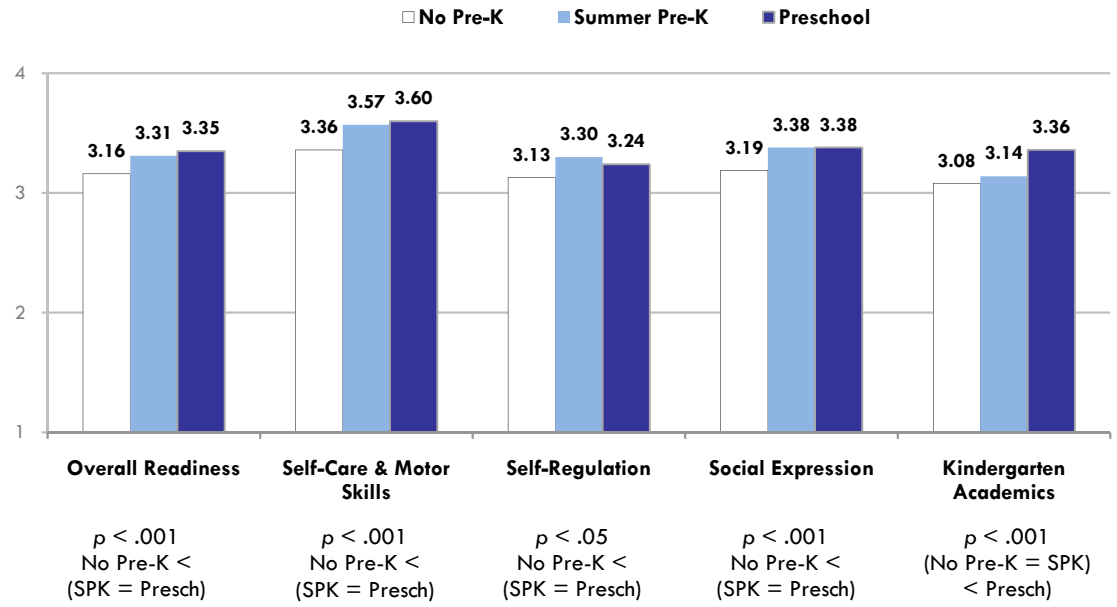
Significant readiness differences were found among the three groups, according to an analysis of covariance that controlled for basic demographic and socioeconomic differences and the set of measurement variables controlled for in the regression analyses described in the previous report section. The adjusted means for each of the three groups (after controlling for sample differences and measurement variables) is displayed in the figure on the following page. The figure shows that enhanced readiness skills are associated with both short- and long-term pre-k experiences.

- **Were Summer Pre-K students more ready for school than children with no preschool experience?** Yes. Overall readiness levels for students who had attended F5AC's SPK program were significantly higher than the readiness levels of students who had not had any preschool experience. This overall difference in readiness levels was driven by statistically higher readiness scores among the SPK students in three of the four *Basic Building Blocks*, including *Self-Care & Motor Skills, Self-Regulation,* and *Social Expression*. SPK students had somewhat higher readiness levels in *Kindergarten Academics* than students who had no preschool experience, but this difference did not reach statistical significance.
- **How do children who have participated in the F5AC Summer Pre-K compare to children who attended preschool?** As the figure on the next page shows, students who attended the SPK program made the most of their short time in the program. On *Self-Care & Motor Skills, Self-Regulation,* and *Social Expression,* the adjusted means for SPK students were similar to those of students who had a longer-term preschool or center-based care experience. In one skill area, however – the *Kindergarten Academics* domain

[8] For this set of analysis, a conservative approach was used for assigning students to one of these groups. Specifically, if a student was identified as having both SPK and a longer-term preschool experience, they were removed from these analyses.

– the students who had been in a longer-term preschool program had significantly higher readiness levels than students who had been exposed to the shorter-term SPK program.

Figure 82. **Students' Readiness as a Function of Pre-K Experience – Adjusted Means**

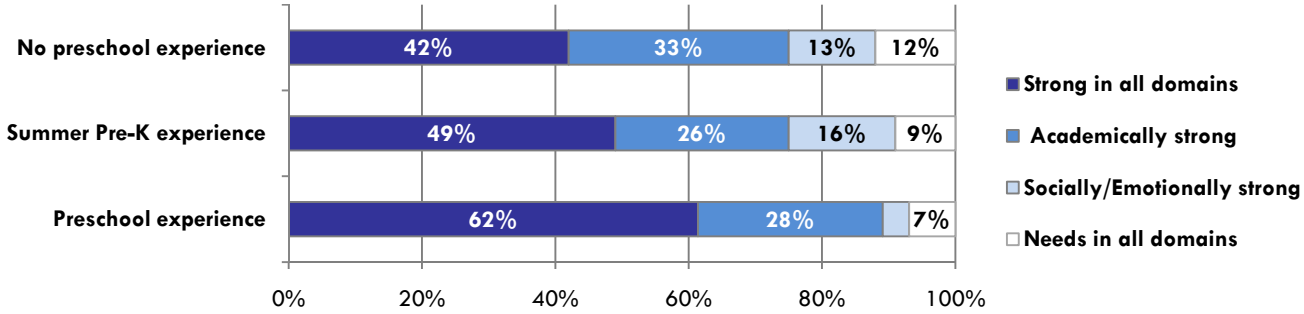


Source: Kindergarten Observation Form I (2010).

Note: Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2=just beginning, 3=in progress, 4=proficient. Scores are based on 422-425 "No Pre-K" students, 86-87 "Summer Pre-K" students, and 789-791 "Preschool" students. Differences in mean scores are indicated above, according to analyses of covariance, with control variables noted in regression section, as well as basic demographics: Maternal education, income, sex, age, and EL status. Post-hoc tests revealed marginal or significant group differences as indicated above.

ASR next examined the *Readiness Portraits* of students, as a function of what type of pre-kindergarten experience they had had. As the figure shows, there were more SPK students who were *Strong in all domains* than there were among students with no pre-k experience at all. There were slightly fewer SPK students who had comprehensive readiness needs in all domains that among the group of students with no preschool experience. Both of these groups of students lagged behind the students with a longer-term preschool experience, however; among these students, 62% were strong across all *Basic Building Blocks*.

Figure 83. **Readiness Portraits as a Function of Pre-K and Preschool Experience**



Source: Kindergarten Observation Form I (2010). Note: Percentages may not sum to 100 due to rounding. Scores are based on 436 No Pre-K students, 87 Summer Pre-K students, and 815 Preschool students. The distribution of students into portraits among the three groups was significantly different overall, according to chi-square tests ($p < .001$).

Section Summary

Comparisons of those who had and had not received F5AC services showed that F5AC recipients were a particularly high-need group. Compared to non-recipients, those who received F5AC services were more likely to have been from families that included teen mothers and single parents, had lower incomes and education levels, engaged in fewer family activities and used less community resources such as parks and libraries, and felt they had less social support for their parenting needs.

Analyses comparing F5AC program recipients and non-recipients did not reveal readiness benefits associated with participation in some programs, including Post-Partum Visits, Pediatric Development Screening Support, and Preschool with Mental Health Consultation. However, students whose families received services through Intensive Family Support Case Management had marginally higher levels of readiness than non-participants, particularly in the areas of *Self-Regulation* and *Social Expression*.

Promising readiness trends were found for the Summer Pre-Kindergarten program as well. The readiness levels of three groups of students were compared: (1) those who had no preschool or pre-k educational experience; (2) those who had F5AC SPK experience; and (3) those who had attended a licensed preschool or child care center (e.g., Head Start, State Preschool or private program). After controlling for differences in these groups of students, results revealed that SPK students were more ready for school than children with no preschool experience in all areas except *Kindergarten Academics*, in which there was a trend for enhanced readiness in SPK students that did not reach statistical significance. The adjusted readiness scores of the SPK students were similar to those of students with a full preschool experience in all domains but *Kindergarten Academics.* In this skill area, preschooled students maintained a significant advantage.

PART 8
Conclusions and Recommendations

Contents of this Chapter:

This section draws upon the findings from the 2010 school readiness assessment to suggest possible directions for application and intervention to enhance children's readiness for school in Alameda County.

Key Findings:

Development of Self-Regulation Skills Should be an Ongoing Priority for Supporting Children during their First Five Years

- Students assessed had the greatest needs in the area of *Self-Regulation* skill development, and teachers viewed these skills as being highly important for kindergarten entry. Even with the significant time that kindergarten teachers spent on these skills, they did not feel skills in this area were easy to impact.
- Higher levels of proficiency in *Self-Regulation* skills at kindergarten entry (in combination with *Kindergarten Academics)* have been shown to be predictive of later school success.
- More emphasis on the development of *Self-Regulation* skills in home and early childhood education settings is needed prior to kindergarten entry.

Community Interventions Should Target the Factors that Are Most Strongly Associated with Enhanced Readiness Levels

- Several strong predictors of school readiness are amenable to community intervention through F5AC programs and other services. Specifically, community interventions may help enhance the readiness of Alameda children by:
    - Promoting high quality preschool experiences
    - Providing information to parents to help them work on their children's readiness
    - Providing support to families to buffer stress and ensure children's physical and emotional well-being
    - Enhancing communication between ECE and elementary settings

For Children Who Have Not Had a Longer-Term Preschool Experience, F5AC's Summer Pre-K Program is Strongly Recommended

- Participation in F5AC's Summer Pre-Kindergarten programs boosted children's readiness to levels comparable to those of children with longer-term preschool experience in most readiness domains.
- F5AC should to continue to find ways to offer more of these SPK classes, particularly in county regions and populations in which the percentage of students entering school with preschool experience is lower than average.

Conclusions and Recommendations

Development of Self-Regulation Skills Should be an Ongoing Priority for Supporting Children During Their First Five Years

The skills in which students in this study had the greatest needs as they entered kindergarten were *Self-Regulation* skills. Across all of the *Basic Building Blocks* of readiness, students' average readiness levels were lowest on these skills, and nearly one in four students (23%) was significantly below the level of readiness that teachers felt they needed to have to be successful in school. These types of skills also posed a dilemma for kindergarten teachers in their instruction – teachers felt these skills were very important for children to have to be school-ready, yet they found themselves spending more time on these skills (along with the basic *Kindergarten Academics* skills) than any others. Even with the significant time they spent on these skills, teachers did not find them to be easy to impact.

Taken together, these circumstances suggest that in pre-k settings and in the home, more emphasis needs to be placed on developing children's ability to focus attention and control their impulses and emotions before they get to kindergarten. Other data from this study underscore that this is not a simple task, and that merely enrolling children in preschool does not necessarily address the problem, as preschool was shown in this study to be related to stronger readiness levels in all readiness domains except *Self-Regulation*. It may be that only certain types of preschool curricula – or only limited hours in preschool, as other research has suggested (e.g., Loeb, Bridges, Bassok, Fuller, & Rumberger, 2007) – may positively impact *Self-Regulation* skills.

A few research-based strategies for fostering children's *Self-Regulation* skills include:

- Fostering parent involvement and offering parenting education. Warm and responsive early relationships set the foundations for children's positive social and emotional development (Boyd, Barnett, Bodrova, Leong, & Gomby, 2005).
- Providing many opportunities for pretend play at home and in the classroom. Imaginative play provides an abundance of opportunities for children to practice and internalize social norms/rules and safely explore their feelings. Adults can support children and help to add to the complexity of this play (Berk, Mann, & Ogan, 2006).
- Structuring the home and classroom environments so that children have daily opportunities to make choices, think ahead, plan activities, and consider and use strategies to solve the social problems they encounter. Self-regulation skills must be practiced early and often for optimal brain growth and socioemotional development (Boyd et al., 2005).
- Reading with children and using children's books as opportunities to engage in discussions about emotions and the different ways one can respond when feeling frustrated or angry (Greengrass, 2010).

Recent local longitudinal research linking school readiness at kindergarten to longer-term (third grade) academic outcomes suggests that early *Self-Regulation* skills may play an important role

in later school success as well (ASR, 2010). Specifically, students with a combination of strong skills in both *Kindergarten Academics* and *Self-Regulation* performed better at third grade than students with lower readiness in these domains – including students who had strong skills only in *Kindergarten Academics*. In short, despite the challenges associated with building *Self-Regulation* skills in children, it is a critical need.

Community Interventions Should Target the Factors that Are Most Strongly Associated with Enhanced Readiness Levels

The results of the regression analyses examining significant readiness predictors suggest several opportunities for potentially impactful community interventions.

Promote High-Quality Preschool Experiences

As with all readiness studies conducted to date by ASR, preschool experience emerged as being strongly associated with enhanced readiness (although, as discussed above, not for *Self-Regulation* skills specifically). Although many students in this sample had attended preschool, a significant number had not, and differences in rates of preschool attendance were observed for students from different racial/ethnic backgrounds and income levels, among other characteristics. Districts and community partners should continue to look for new opportunities to provide students with high-quality early education experiences – and to target children and families who are currently underrepresented among the ranks of preschoolers.

As preschool attendance increases, so does the need to ensure that programs that do exist are age-appropriate, are of high quality, and align with the expectations and practices of the elementary schools that their students will eventually attend. To that end, several Bay Area school districts have used the *Kindergarten Observation Form* and a parallel preschool version of the form (the *Pre-Kindergarten Observation Form* [*P-KOF*]) to build connections between their pre-K and K-12 education systems and the providers in each. When preschool providers have used the *P-KOF* alongside kindergarten teachers using the *KOF*, this facilitates the development of a common language and set of expectations for discussing children's readiness and how providers in both systems can support it.

Provide Information to Parents to Help Them Work on Their Children's Readiness

NEGP definitions of school readiness include a specific component recognizing the role that families and communities play in preparing children for school. In this year's assessment, children whose parents received information about how ready their child was for school had higher readiness levels than children of parents who did not receive this information. In light of additional data showing that parents generally are less likely to see their children's readiness needs than their teachers are, this is much-need feedback for parents. Examples of activities families can engage in to smooth the transition to kindergarten include: Visiting the elementary school with the child prior to the start of school, working on school skills at home with the child, attending parent meetings and orientations, asking child care providers if the child is ready for kindergarten, meeting the child's kindergarten teacher prior to the start of school, asking one's child care provider about what to expect in kindergarten, watching books/videos about kindergarten with one's child, reading about the transition to kindergarten, or having the child attend a summer pre-k program. In this study, parents had engaged in four of these ten transition activities on average. The best opportunities for sharing this information come

through children's early care providers, but for those without access to such providers, an important alternative way to reach families may be through social marketing campaigns that teach families to take a whole-child perspective on readiness (i.e., that school skills are not just about shapes, colors, letters, and numbers) and provide guidelines for how to build children's readiness skills at home. Local efforts to educate families and increase families' ability to support their children's transitions to kindergarten in three counties – Santa Clara, San Francisco, and San Mateo – have resulted in the creation and distribution of visually appealing, easy-to-read parent handbooks and DVD's in multiple languages, with each region using its own readiness study findings on the *Basic Building Blocks* to guide action.

Provide Support for Families

Children's basic needs for adequate food, sleep, and good health should always be met. Parents need to be functioning well to help build strong foundations for learning in their children. Regression analyses suggested that these two factors – children's frequency of being tired, hungry, or ill and parents' frequency of experiencing negative feelings about parenting – are strongly related to children's readiness levels. Moreover, a deeper look into the children who were frequently tired, hungry, or ill revealed that, compared to their peers, they were more likely to come from families facing some challenging circumstances, such as single-parent households, a parent's job loss in the last year, and greater levels of life concerns. These findings underscore the connection between strong, healthy families and children's ability to grow and thrive. Programs and services that assist at-risk families in coping with the challenges of parenting, such as those offered through F5AC, may help parents provide home environments that better promote their children's social and emotional development. In this sample, F5AC program recipients had more life stressors and less parenting support than non-recipients. These families were also less likely than non-recipient families to be using community resources or to be engaging in family activities or kindergarten transition activities. Knowledge of these needs can help F5AC programs target and renew efforts to support and educate families in these areas.

Enhance Communication between ECE and Elementary Settings to Support Families and Address Local Readiness Needs

About one in five parents reported that they did not receive information from teachers or others about how and when to register their child for school. In addition, nearly one third of parents did not receive information about their own child's readiness for school. This is important because – in this and other readiness studies – analyses have shown that having this type of information is significantly associated with enhanced student readiness. Opening lines of communication between preschool and kindergarten teachers and other education professionals may be one effective strategy for enhancing support to families and addressing local needs around school readiness. Efforts are currently underway to do just that in Alameda County through the Kindergarten/Early Care and Education (K/ECE) Collaborative. The K/ECE Collaborative provides a forum for discussion between ECE and Elementary professionals. In Fremont, Berkeley, Hayward, Livermore, Oakland, and San Lorenzo the K/ECE collaborative meets two to four times per year with F5AC facilitating in order to discuss readiness, transition practices, and to address district-specific goals in these areas. Attendance is voluntary and attendees include preschool teachers, kindergarten teachers, principals, directors, other professionals in the ECE community (e.g., speech therapists, inclusion coordinators), Parks and Recreation representatives, and anyone interested in and involved with children's transitions to

schools. Participants brainstorm together to identify their district-specific needs and identify one or two goals to achieve by the end of the year or next school year. For example, in Livermore, the collaborative decided to modify their parent brochure to educate families about readiness and how to help their children prepare for school, Fremont has focused on pre-K/Kindergarten articulation, and San Lorenzo has focused on creating a pre-K/K collaborative at each elementary school. The effectiveness of the model will be seen over time, but the K/ECE Collaborative provides one promising communication model that may be of interest to other districts who are striving to improve school readiness in their communities.

For Children Who Have Not Had a Longer-Term Preschool Experience, F5AC's Summer Pre-K Program is Strongly Recommended

Examinations of readiness levels of students who attended F5AC's SPK program showed that they had significantly higher readiness levels than students without any pre-k experience in all domains except *Kindergarten Academics*, in which they were doing slightly better, but not at a level that reached statistical significance. Moreover, after adjusting for demographic and socioeconomic differences in the students, the SPK program participants had similar readiness levels as those with a longer-term preschool or center-based experience – again with the exception of *Kindergarten Academics* skills. F5AC should to continue to find ways to offer more of these SPK classes, particularly in the county regions where the percentage of students entering school with preschool experience is low, and among particular student populations – such as Hispanic/Latino and very low-income students – who have lower-than-average rates of preschool attendance.

PART 9

Three Years of Readiness Assessment in Alameda County: What Have We Learned?

Contents of this Chapter:

- The Fall 2010 assessment marks the third annual measurement of the readiness levels of entering kindergarten students in select schools and districts in Alameda County.
- Although participants in the readiness studies were never intended to be representative of any broader student populations (and thus, it is not possible to clearly capture trends over time), there are still common findings from these studies that have strongly and consistently emerged after three years of measuring readiness in Alameda County.

Key Findings:

Self-Regulation Skills Are Challenging for Teachers and Students Alike

- In three years of assessment, across different districts and county regions, teachers consistently noted that *Self-Regulation* skills were very important for kindergarten entry. Unfortunately, they also require a great deal of classroom time and are among the most difficult skills to impact, according to teachers.
- *Self-Regulation* skills (along with *Kindergarten Academics*) were also consistently the skills in which children were the least proficient when they started school.

Children's Basic Well-Being Plays a Major Role in Readiness

- In 2008, 2009, and 2010, children's well-being (not being hungry, tired, or ill) was the strongest predictor of readiness levels.
- This measure was not a proxy for poverty—children from all income groups were included in the group of children with well-being concerns. Preliminary trends over the past two years of readiness studies indicate that children with well-being concerns tended to come from families who face more stressful life circumstances.

Preschool and F5AC Summer Pre-K Are Both Strongly Associated with Higher Readiness Levels

- Both early childhood education experiences were associated with better readiness outcomes for children across three years of assessment. However, preschool appears to be associated with readiness boosts in the area of *Kindergarten Academics* more so than does SPK, and SPK appears to have particularly positive impacts in the social and emotional domains of readiness.

Three Years of Readiness Assessment in Alameda County: What Have We Learned?

The Fall 2010 assessment marks the third annual measurement of the readiness levels of entering kindergarten students in select schools and districts in Alameda County. Since the pilot assessment in 2008, many things have changed. For its pilot readiness study, F5AC initially focused on measuring readiness in just three county regions with significant F5AC investments. Since then, the targeting of county regions where F5AC has focused many of its efforts has continued, but the reach of the readiness study has also expanded considerably and has grown to include some participants that were not in high-risk county regions. In 2008, 577 students from three different school districts participated in the study (with one district's participation including just one classroom in one school). By 2010, participation included almost 1,400 students from eight different school districts.

As this shift took place, the characteristics of the sample of participants changed as well. However, the participants in the readiness studies were never intended to be representative of any broader student populations; the information collected describes only the students and families assessed. For this reason, it would be misleading – and a misuse of the data – to try to draw conclusions about changes in readiness levels or other trends occurring over time. Instead, this section focuses on describing the common findings that have strongly and consistently emerged after three years of measuring readiness in Alameda County, which parallel several of the key themes that were discussed in the previous "Conclusions" section.

Self-Regulation Skills Are Challenging for Teachers and Students Alike

In three years of assessments, across different districts and county regions and with different profiles of participating kindergarteners, teachers have consistently noted that skills related to *Self-Regulation* are very important for a successful kindergarten entry, yet they find these skills to be both difficult to change and quite time-consuming to address in their classrooms. Yet, along with *Kindergarten Academics* skills (which teachers see as being least important to have at kindergarten entry) these are the skills in which children are consistently the least proficient when they start school.

In 2011, California will move the age cut-off for kindergarten entry to December 2nd and will begin implementing Transitional Kindergarten programs for those children who are too young to enroll in kindergarten. This change is supported by three years of readiness data demonstrating that younger children do not enter kindergarten as ready as their older counterparts in any of the readiness skill domains, including *Self-Regulation.* Giving these younger children an additional year to mature and develop the social-emotional foundations needed through Transitional Kindergarten may reduce the readiness needs that will be identified in future assessments in Alameda County.

Children's Basic Well-Being Plays a Major Role in Readiness

In 2008, 2009, and 2010, children's well-being (not being tired, hungry, or ill) was the strongest predictor of their readiness levels – including overall readiness and each one of the four *Basic Building Blocks*. In part because this factor emerged as such an important readiness predictor, revisions were made between the 2009 and 2010 administrations to increase the precision of the items related to well-being. Questions were changed from a yes/no format ("Does this child generally come to school well-rested?") to a frequency format ("How frequently did the following occur?"). The question language was also changed to increase precision and reduce the amount of inference teachers had to make (e.g., child "come[s] to school well-fed" became "child indicated s/he was hungry"). Even with these measurement changes, the same results were found: children with these well-being concerns were doing much more poorly in their readiness skills than their peers without such concerns.

Importantly, this measure is not a proxy for poverty. Students from every income level were included among the group of students with concerns, with equal percentages in both the lowest-income group (making less than $15,000 per year) and the highest-income group (making $100,000 or more per year). Preliminary trends over the past two years of readiness data suggest that children who have these well-being concerns appear to come from families that have some markers of difficult family stressors, such as job loss or having a mother who was a teen when the child was born.

Preschool and F5AC Summer Pre-K Are Both Strongly Associated with Higher Readiness Levels (But They Arrive at Those Levels Differently)

Across three years of readiness studies, students with preschool experience (through a licensed preschool or childcare center) or F5AC SPK experience have entered kindergarten with stronger readiness skills, after adjusting for the ways that groups of students attending these programs differ. Examinations of which skills tend to be most associated with these experiences reveal some different trends for the two types of pre-k experiences, however. Analyses of preschool's association with readiness show that preschool may have its biggest impact in teaching *Kindergarten Academics*, whereas its associations with other readiness domains – particularly *Self-Regulation* – are more tenuous. Indeed, several studies have found that preschool's impact on social and emotional domains is not always a positive one.

For the F5AC SPK program, data across three years suggest the opposite trend; these students tend to be more ready for school relative to non-preschooled peers due to gains in social and emotional domains, more than in *Kindergarten Academics*. In two out of three assessment years, students in SPK did not achieve the level of *Kindergarten Academics* skills that their peers with a longer-term preschool experience possessed, despite having some small but non-significant gains over students with no pre-k experience at all. This suggests that it may be more difficult to impact *Kindergarten Academics* skills in the context of a short-term program such as SPK than it is to promote social skills development and basic emotion regulation.

About the Researcher

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 30 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

Kristi Kelly, Ph.D., Project Manager

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

Kate Branscomb, Ph.D., Senior Research Analyst

San Jose Office

408.247.8319

www.appliedsurveyresearch.org

References

Alexander, K. L., & Entwisle, D. R. (1988). Achievement in the first 2 years of school: Patterns and processes. *Monographs of the Society for Research in Child Development*, 53(2), 1-157.

Alexander, K. L., Entwisle, D. R., & Dauber, S. L. (1993). First grade classroom behavior: Its short- and long-term consequences for school performance. *Child Development, 64*, 801–514.

Applied Survey Research. (2005). *Assessing school readiness in Santa Clara County: Results from the 2004 School Readiness Assessment Project.* Report can be downloaded at www.appliedsurveyresearch.org.

Applied Survey Research. (2006). *Are children ready for school? Assessment of kindergarten readiness in San Mateo and Santa Clara counties: Comprehensive report 2005.* Report can be downloaded at www.appliedsurveyresearch.org.

Applied Survey Research. (2008). *Does readiness matter? How kindergarten readiness translates into academic success.* Report can be downloaded at www.appliedsurveyresearch.org.

Applied Survey Research. (2008). *Children's readiness for kindergarten in San Francisco: Results of the Fall 2007 assessment in San Francisco Unified School District.* Report can be downloaded at www.appliedsurveyresearch.org.

Applied Survey Research. (2009). *School readiness in Alameda County: Results of the 2008 pilot assessment.* Report can be downloaded at www.appliedsurveyresearch.org.

Applied Survey Research. (2010). *School readiness in Alameda County 2009: Results of the Fall 2009 assessment.* Report can be downloaded at www.appliedsurveyresearch.org.

Applied Survey Research. (2010). *School readiness and student achievement: A longitudinal analysis of Santa Clara and San Mateo County students.* Report can be downloaded at www.appliedsurveyresearch.org.

Berk, L. A., Mann, T. D., & Ogan, A. T. (2006). Make-believe play: Wellspring for development of self-regulation. In D. G. Singer, R. M. Golinkoff, & K. Hirsh-Pasek (Eds.), *Play = learning: How play motivates and enhances children's cognitive and socialemotional growth* (pp. 74–100). New York, NY: Oxford Press.

Baroody, A. J. (2003). The development of adaptive expertise and flexibility: The integration of conceptual and procedural knowledge. In A. J. Baroody & A. Dowker (Eds.), *The development of arithmetic concepts and skills: Constructing adaptive expertise studies* (pp. 1–34). Mahwah, NJ: Erlbaum.

Boyd, J.S., Barnett, S., Bodrova, E., Leong, D., & Gomby, D. (March, 2005). Promoting children's social and emotional development through preschool education. *Preschool Policy Brief.* Retrieved from http://www.tats.ucf.edu/docs/report7.pdf

Byrd R.S., & Weitzman, M.L. (1994). Predictors of early grade retention among children in the United States. *Pediatrics, 93*, 481-487.

Cannon, J. S. & Karoly, L. A. (2007). *Who is ahead and who is behind? Gaps in school readiness and student achievement in the early grades for California's children.* Published by the RAND Corporation.

Children Now (2010). *2010 California county scorecard of children's well-being: Alameda county.* Report can be downloaded at http://www.childrennow.org/subsites/publications/invest/scorecard10/scorecard10_alameda.htm

Duncan, G. D., Claessens, A., Huston, A. C., Pagani, L. S., Engel, M., Sexton, H., Dowsett, C. J., Magnuson, K., Klebanov, P., Feinstein, L., Brooks-Gunn, J., Duckworth, K., & Japel, C. (2007*). School readiness and later achievement. Developmental Psychology, 43*, 1428-1446.

Fiscella, K., & Kitzman, H. (2009). Disparities in academic achievement and health: The intersection of child education and health policy. *Pediatrics, 123*, 1073-1080.

Greengrass, E. (Fall, 2010). Self regulation: Using children's literature to support self-control. *Texas Child Care Quarterly,* 24-35.

Hair, E.C., Halle, T., Terry-Humen, E., and Calkins, J. (2003). *Naturally occurring patterns of school readiness: How the multiple dimensions of school readiness fit together.* Paper presented at the 2003 Biennial Meeting for the Society for Research in Child Development: Tampa, Fl.

Jordan, N.C., Kaplan, D., Ramineni, C., Locuniak, M.N. (2009). Early math matters: Kindergarten number competence and later mathematic outcomes. *Developmental Psychology, 45*, 850-867.

Kagan, S.L., Moore, E., Bredekamp, S. (Eds) (1995). *Reconsidering Children´s Early Learning and Development: Toward Shared Beliefs and Vocabulary.* Washington, DC: National Education Goals Panel.

Le V. N., Kirby, S. N., Barney, H., Setodji, C. M., Gershwin, D. (2006). *School readiness, full-day kindergarten, and student achievement: An empirical investigation.* Published by the RAND Corporation.

Li-Grining, C.P., Votruba-Drzal E., Maldonado-Carreno, C, Haas, K. (2010). Children's early approaches to learning and academic trajectories through fifth grade. *Developmental Psychology, 46*, 1062-1077.

Loeb, S., Bridges, M., Bassok, D., Fuller, B., Rumberger, R.W. (2007). How much is too much? The influence of preschool centers on children's social and cognitive development. *Economics of Education Review, 26*, 52-66.

Raver, C. C. (2003). *Young children's emotional development and school readiness.* Clearinghouse on Early Education and Parenting. http://ceep.crc.uiuc.edu/eecearchive/digests/2003/raver03.html.

Raver, C.C, & Knitzer, J. (July, 2002). *Ready to Enter: What Research Tells Policymakers About Strategies to Promote Social and Emotional School Readiness Among Three- and Four- Year-Old Children.* http://www.nccp.org/media/pew02c-text.pdf.