School Readiness Assessment Model™
The ASR

2013

SCHOOL READINESS
in Alameda County
Executive Summary

Executive Summary

Background

Every year a new cohort of kindergartners enters school in Alameda County, bringing with them a range of demographic and socioeconomic backgrounds, family environments, and early schooling experiences. These backgrounds and experiences will play a significant role in shaping the degree of preparedness that children possess as they begin the transition to school.

In 2013, First 5 Alameda County (F5AC), with support from the Interagency Children's Policy Council (ICPC) and the Thomas J. Long Foundation, commissioned Applied Survey Research (ASR) to conduct an assessment of the school readiness levels of new kindergarten students for the fifth year since 2008. The 2013 assessment took place in 14 Alameda County school districts.

This study offers policy makers and educational staff some of the earliest possible snapshots of children's well-being and readiness for school across Alameda County. It is hoped that with this information, communities, schools and families will be spurred to take action to ensure that children are given the best opportunities for long term success.

Main Findings

The current readiness study investigated two primary questions related to the school readiness levels of entering kindergarten students:

> *45% of Alameda County's children were at or near proficiency in all four domains of readiness.*

1. *How ready for school are the sampled kindergarten students?*

   Children in Alameda County were **"*In Progress*"** on the development of their readiness skills (overall readiness score: 3.24 on a four-point scale of readiness skill proficiency).

   Forty-five percent of children in Alameda County were at or near proficiency on all four domains of readiness (Self-Care & Motor Skills, Self-Regulation, Social Expression, and Kindergarten Academics).

2. *What family factors and child characteristics are associated with higher levels of school readiness?*

   Findings revealed that children's health and well-being, age, English fluency, gender (being a girl), attending preschool, mother's education, and whether the family received information about school readiness were all positively associated with children's readiness.

The study found that children in Alameda County who entered kindergarten with strong readiness skills tended to have particular characteristics and experiences that separated them from their peers. Reflecting on these findings may help communities shape targeted, effective responses that boost children's preparation for school.

- **Child age, gender, and special needs are common predictors of readiness.**

  Children who were ready for school were more likely to be female, typically developing, from relatively affluent and educated families, fluent in English, and older than their peers. These findings are in line with other research on factors related to school readiness.

- **The achievement gap between Asian students and students of other racial/ethnic groups has its roots before children even enter school.**

  Ethnic minority groups have typically demonstrated lower achievement levels at school entry relative to white students (Lee & Burkham, 2002). In the current sample, however, only Asian students performed better than students from other racial/ethnic groups, after controlling for family environment and resource variables. The readiness levels of white students were comparable to those of black and Hispanic/Latino students.

- **Children need to be healthy to learn.**

  The results from the current study support research that has found that health significantly contributes to school readiness (Currie, 2005).

- **Home visiting programs may help parents better prepare their children for school.**

  The families enrolled in home visiting programs tended to face greater challenges than other families (e.g., they were more likely to be low income and report other family stressors), but they also demonstrated greater strengths in terms of preparing their children for kindergarten.

- **Children and their families likely benefit from preschool and other pre-k experiences, including First 5 pre-K programs.**

  Preschool attendance was strongly associated with higher readiness skills as well as enriching home environments. Children who attended preschool were read to more frequently each week, and their families engaged in more transition activities, like meeting with the kindergarten teacher and working on school skills.
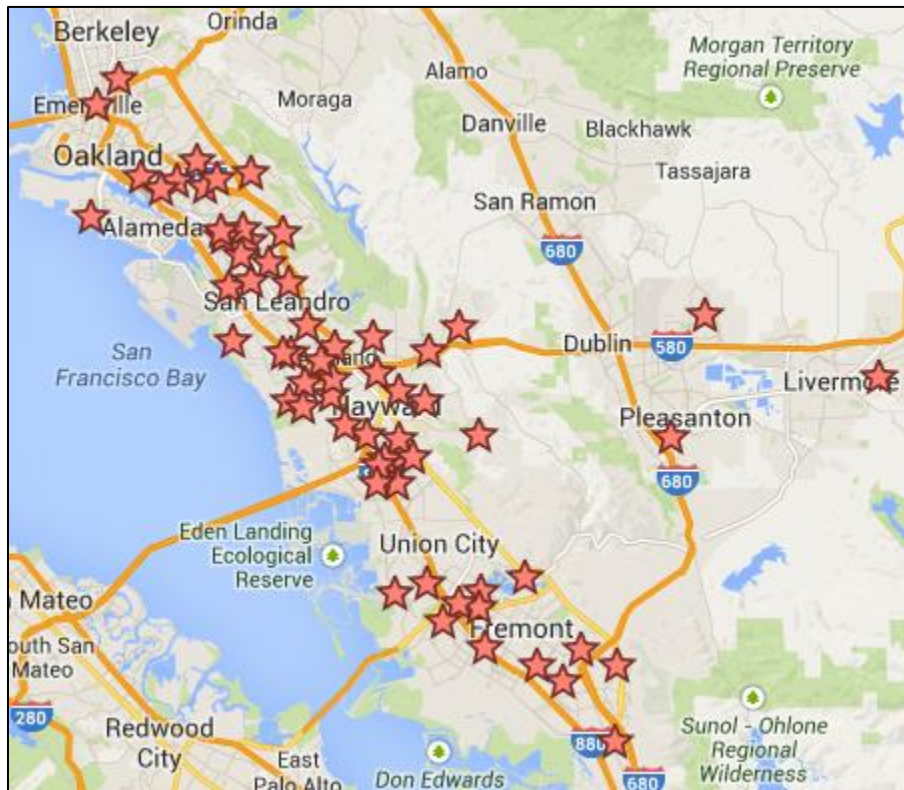
Overview of the Assessment

In late 2000, Applied Survey Research (ASR) was commissioned to develop research materials and a protocol to conduct assessments of Bay Area students' levels of readiness for school. The project resulted in the creation of a valid and reliable instrument to measure readiness levels. Efforts were made to ensure the measure was also "teacher-friendly" and sensitive to the measurement challenges inherent in a typical kindergarten classroom setting.

These efforts resulted in the *Kindergarten Observation Form (KOF)*, which was first implemented in San Mateo County in 2001. Since then, readiness assessments have also been conducted in counties across Northern California, as well as in Lake County (Illinois), Coconino County (Arizona), and throughout the network of providers in the Los Angeles Unified Preschool (LAUP).

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 2013, close to 1,700 families consented to have their children take part in the study. These children attended 64 schools across the County. Figure 1 illustrates the locations of participating schools.

Figure 1. **2013 School Readiness Assessment Participating Schools**

Participating kindergarten teachers were trained to assess their students' readiness skills and instructed to distribute surveys to the students' parents. The comprehensive readiness assessment involved the completion of the following forms:

- The *Kindergarten Observation Form,* which teachers use to assess children's readiness skills;

- A *Parent Information Form (PIF),* which parents complete to provide information about children's family environments and basic demographic and socioeconomic information; and

- A *Preschool Experience Form (PEF),* which asks parents to indicate what preschool and child care experiences the child had in the year prior to kindergarten entry.
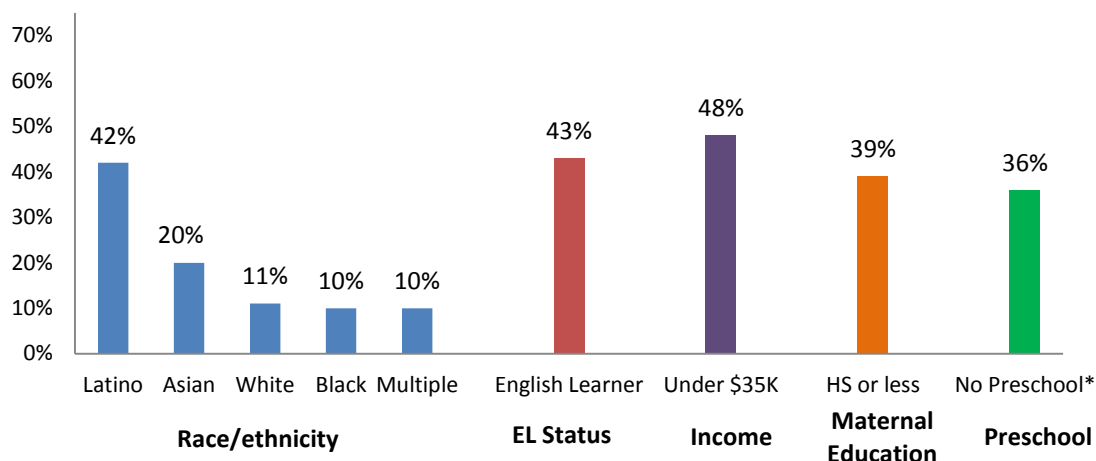
Additional data came from F5AC's ECChange database, which contains records of those who have received F5AC services. Children in the assessment were matched to records in this database in order to examine their participation in F5AC programs and services.

Findings

Students and Families in the Assessment

The students entering kindergarten in 2013 were diverse in terms of race/ethnicity, language, and socio-economic background. Hispanic/Latino students made up the largest ethnic/racial group in the study sample and 43 percent were English Learners. Nearly half of the families in the sample made under $35,000 per year and 39 percent of mothers had no more than a high school education. Just over a third of students (36%) had not attended preschool.[1]

Figure 2. **Sample Demographics and Preschool Attendance**

Source: Kindergarten Observation Form (2013), Parent Information Form (2013)

*Students who did not attend a licensed preschool or childcare center.

Note: Sample size=1,490-1,696

Family Engagement in Kindergarten Transition Activities

Many families engaged in activities to prepare for the transition to kindergarten. In particular, the majority of families reported that they worked on school skills (61%) and read together with their child at least five times per week (58%). Fewer families sent their child to a summer pre-kindergarten program (25%) or read books or articles about the school transition (26%).
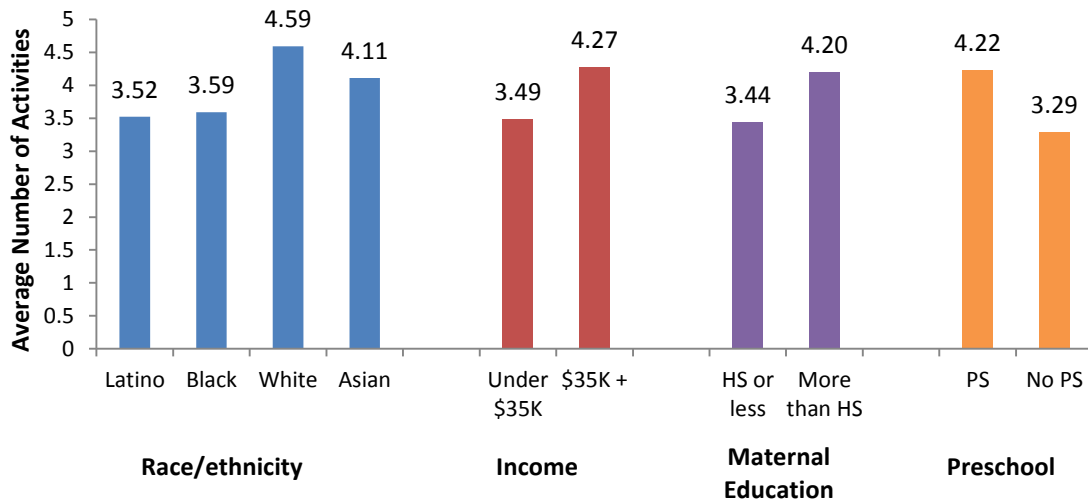
> *Engagement in transition activities was higher among families with more education and higher incomes; Asian and white families; and among families who had sent their child to preschool.*

As shown in Figure 3, engagement in these activities varied by child and family backgrounds. More affluent and educated families engaged in more readiness activities with their children prior to kindergarten than poorer and less educated families. In addition, parents of Hispanic/Latino and black children participated in significantly fewer activities than parents of Asian and white children. Finally, the parents of children who attend preschool reported engaging in more activities than the parents of children who had no preschool exposure.

---

[1] Teachers were also asked about whether child participated in Transitional Kindergarten (TK), but because of inconsistent responses to this item, data for TK are not reported.

Figure 3. **Transition Activities by Child and Family Characteristics**

Note: Sample sizes=1,570 (race/ethnicity), 1,477 (income), 1,523 (education), 1,507 (preschool). The following racial/ethnic comparisons were significant after adjusting for multiple comparisons: Latino & white (p<.001); Latino & Asian (p<.001); black & white (p<.001). Differences based on income, education, and preschool also significant (p<.001).

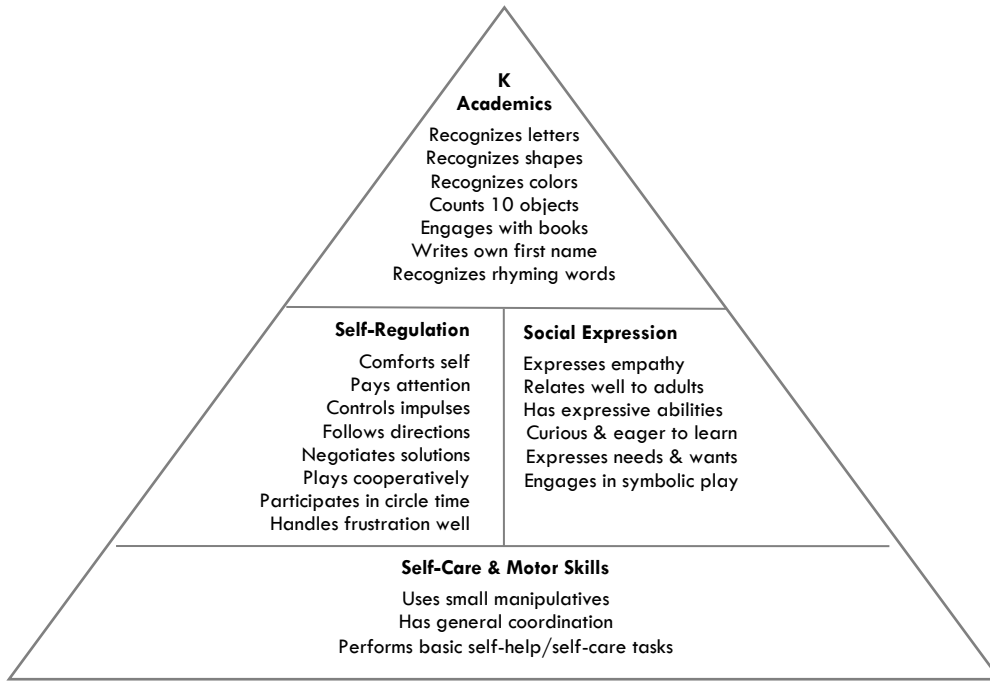## How Ready for School Are the Sampled Kindergarten Students?

Kindergarten teachers rated students on 24 skills using a four-point scale that ranged from *Not Yet* (child does not yet demonstrate skill, knowledge, or behavior; cannot perform without assistance) to *Proficient* (child demonstrates skill, knowledge, behavior consistently and competently; performs independently). Children's performance across these 24 readiness skills are sorted into a readiness skills framework called the four *Basic Building Blocks* of readiness:[2]

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

- *Social Expression* (skills related to interacting with adults and other children)

- *Self-Regulation* (basic emotion regulation and self-control skills needed to be able to perform well in the classroom)

- *Kindergarten Academics* (skills that are more academic in nature, such as writing, counting, and identifying shapes and colors)

Figure 4 shows the 24 individual skills on which students were assessed, as well as how the skills sort into the four *Basic Building Blocks*.
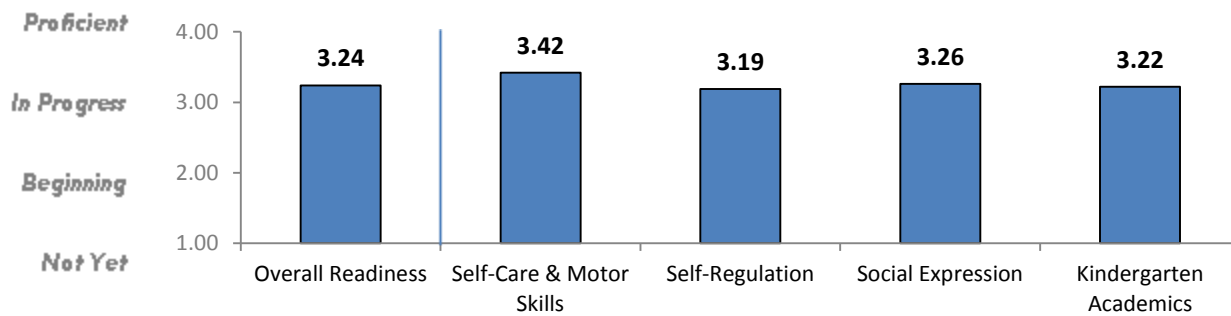
---

[2] A procedure called factor analysis is used to determine what readiness dimensions are represented by the data.

Figure 4. **Basic Building Blocks of Readiness**

As seen in Figure 5, Alameda County students had an average score of 3.24 across readiness skills in 2013. They demonstrated strengths in the *Self-Care & Motor Skills* domain, but were still developing their *Self-Regulation* skills. These scores were weighted to make the sample representative of the County kindergarten population in terms of race/ethnicity.

Figure 5. **Students' Proficiency across Four** *Basic Building Blocks* **of Readiness**

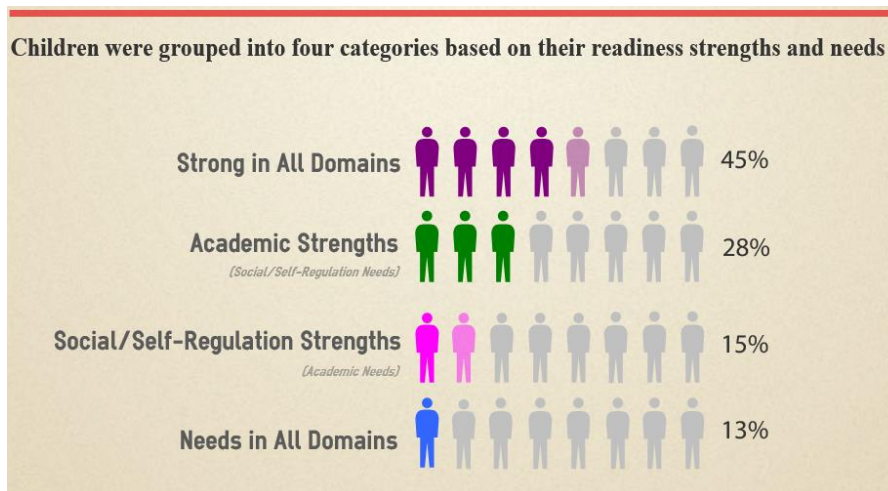

Source: Kindergarten Observation Form (2013)

Note: Weighted by race/ethnicity. Means can range from 1 to 4. Scale points are as follows: 1=not yet, 2=beginning, 3=in progress, 4=proficient. Sample Size=1,673-1,694.

Readiness Portraits

The previous figure showed children's average readiness skill scores, but children also exhibited different <u>patterns</u> of readiness strengths and challenges. For a more detailed look at different patterns of readiness, children were sorted into one of four *Readiness Portraits* based on their relative proficiency across the readiness skills:[3]

- *Strong in all domains:* Forty-five percent of students in the County were relatively strong across all four *Basic Building Blocks* of readiness.

- *Academically Strengths:* Twenty-eight percent of the sample showed proficiency in their early academic skills (and *Self-Care & Motor Skills*) but some challenges in the social-emotional areas of readiness.

- *Social/Self-Regulation Strengths:* The remaining 15 percent of the students were relatively strong in the social-emotional dimensions of readiness but still developing their *Kindergarten Academics* skills.

- *Needs in all domains:* Thirteen percent of students demonstrated significant readiness needs across all four skill domains. These students had not yet learned – or were just beginning to learn – almost all of the 24 readiness skills.

Figure 6. **The Prevalence of Each *Readiness Portrait***

Children were grouped into four categories based on their readiness strengths and needs

Strong in All Domains — 45%

Academic Strengths *(Social/Self-Regulation Needs)* — 28%

Social/Self-Regulation Strengths *(Academic Needs)* — 15%

Needs in All Domains — 13%

Source: Kindergarten Observation Form (2013)

Note: Weighted by ethnicity. Sample size=1,692. Percentages may not sum to 100 due to rounding.

Readiness in the Context of Long-Term Academic Outcomes

In addition to examining a range of readiness patterns, it is valuable to consider the levels of readiness that research shows are most predictive of future academic success. In 2004 and 2005, longitudinal studies were conducted linking school readiness levels measured by

> *A combination of high* Kindergarten Academics *and* Self-Regulation *skills predicts success on 3rd grade CSTs.*

---

[3] Children were sorted into one of the four *Readiness Portraits* via a statistical procedure called cluster analysis.

the *KOF* in 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. With this readiness study, Alameda County is building its own benchmark to identify which combination of skills is most predictive of academic success by third grade.

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

A set of analyses was then conducted to examine what factors were associated with greater school overall 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.
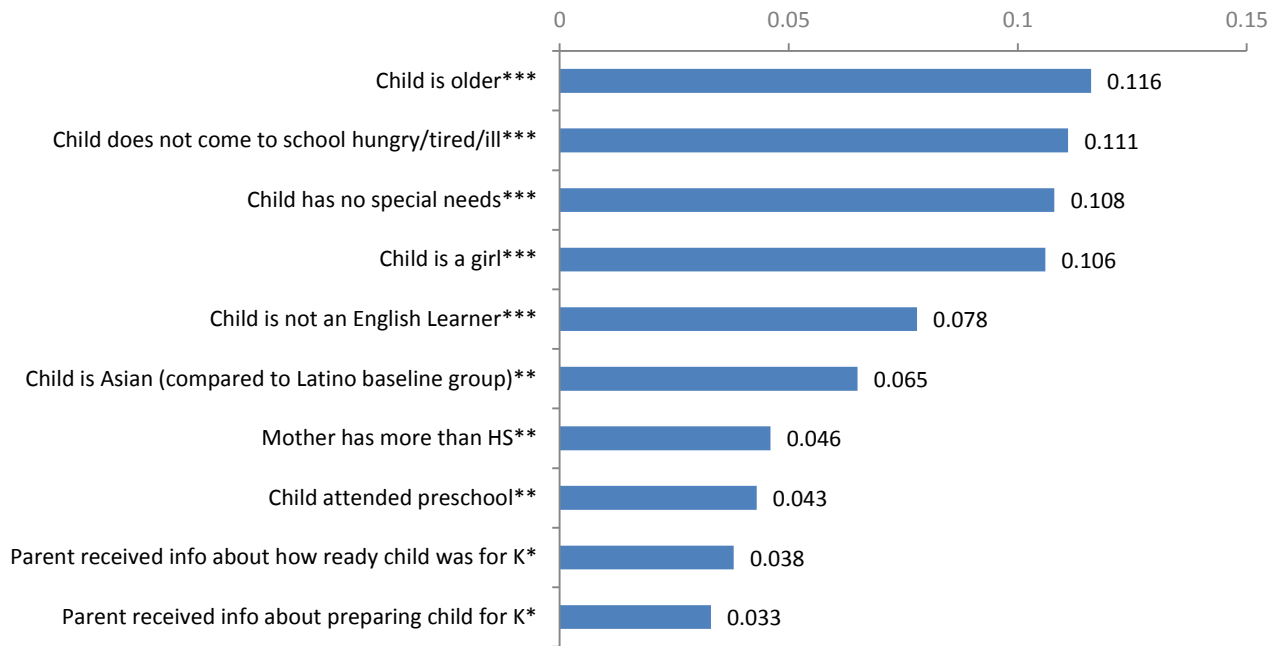
The strongest predictors of overall readiness in Alameda County were **age** and students' basic **well-being**. Students who were younger and those who came to school ill, hungry, or tired, had readiness levels that were significantly lower than those of their healthier and older peers.

Other factors positively associated with readiness included: not having special needs; being a girl; being proficient in English; belonging to certain racial/ethnic groups (Asian students scored higher than children from other racial/ethnic groups); coming from families with higher education levels; attending licensed, center-based preschool; and coming from families that received school readiness information.

> *Age, well-being, special needs, gender, and English proficiency were strongly tied to school readiness.*

The figure on the following page illustrates the relative strength of these factors in predicting overall readiness scores.

Figure 7.   **Key Factors that Predict Overall School Readiness**

Source: Kindergarten Observation Form (2013), Parent Information Form (2013), Preschool Experience Form (2013)

Note: ***Significant at p<.001; **Significant at p<.01; *Significant at p<.05. For a full listing of all variables entered into the model, see text. The overall regression model was significant (p<.001), explaining 25% of the variance in kindergarten readiness (R^2 = .25).

What is the relationship between participation in a F5AC's Summer Pre-K or Year-Round Preschool Program and key readiness-related parent and child outcomes?
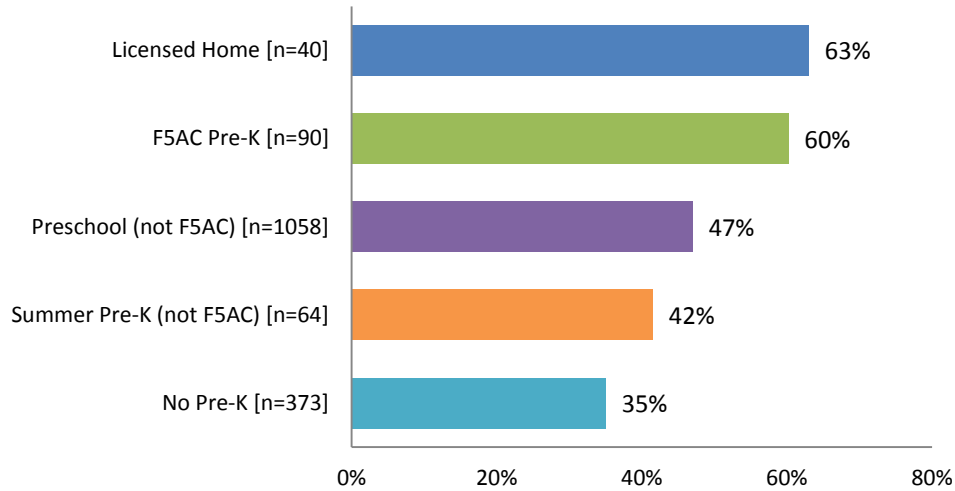
Finally, we took a deeper look at the characteristics and readiness levels of children involved in a First 5-sponsored pre-kindergarten program. Students attending F5AC's Pre-K programs were more likely than their peers to be Hispanic/Latino and less likely to be Asian, black, or of mixed race. They were also more likely to be English Learners and more likely to come from a family in which the mother had no more than a high school education.

> *Families involved in F5AC Pre-K were more likely to have received readiness information, engaged in kindergarten transition activities, and read together frequently than families of children without pre-K.*

Compared to parents of children with no pre-K exposure, parents of children enrolled in a F5AC pre-K program were more likely to have received information about helping their child get ready for school and how to register for kindergarten, and they engaged in more transition activities to get their child prepared for school entry. These families also read together more frequently each week.

Children attending a F5AC pre-K program also had significantly higher scores in *Social Expression* and marginally higher scores overall compared to children who did not attend. Children attending one of these programs were also more likely than children without pre-K to be strong across all four domains of readiness (see Figure 8).

Figure 8. **Percent *Strong in All Domains*, by Pre-K Experience**

Source: ECChange database, Kindergarten Observation Form (2013), Parent Information Form (2013), Preschool Experience Form (2013)

Note: Sample size=1,653. Overall differences were significant according to chi-square test (p<.001). The following group differences were significant, after adjusting for multiple comparisons: No Pre-K & F5AC (p<.001), Home & No Pre-K (p<.001).

Acknowledgments

This study was commissioned by First 5 Alameda County, the Alameda County Interagency Children's Policy Council (ICPC) and the Thomas J. Long Foundation, with the intention of identifying opportunities to close the readiness gap among children in the county. First 5 Alameda County funds a comprehensive set of services and supports that 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 help ensure that children entering school have every opportunity to succeed. It is particularly focused on providing supports in county regions where there are disproportionately high levels of poverty, low performing schools, and poor health outcomes. ICPC engages in cross system collaboration by improving communication, developing child-friendly policies and initiating systems change that result in safe, healthy and thriving children. The Thomas J. Long Foundation is a nonprofit public benefit corporation that funds local organizations that help East Bay communities thrive. Lastly, this study would not be possible without the participation and ongoing dedication of teachers, principals and school district administrators across the county.

References

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.

Currie, J. M. (2005). Health disparities and gaps in school readiness. *The Future of Children*, *15*(1), 117-138.

Lee, V. E., & Burkam, D. T. (2002). *Inequality at the starting gate: Social background differences in achievement as children begin school*. Economic Policy Institute, 1660 L Street, NW, Suite 1200, Washington, DC 20036.

Magnuson, K. A., Meyers, M. K., Ruhm, C. J., & Waldfogel, J. (2004). Inequality in preschool education and school readiness. *American Educational Research Journal*, *41*(1), 115-157.

Ryan, R. M., Fauth, R. C., & Brooks-Gunn, J. (2006). Childhood poverty: Implications for school readiness and early childhood education. In B. Spodek & O. N. Saracho (Eds.), *Handbook of research on the education of children* (2nd edition) (pp. 323-346). Mahwah, NJ: Erlbaum Associates.

Zhai, F., Brooks-Gunn, J., & Waldfogel, J. (2011). Head Start and urban children's school readiness: A birth cohort study in 18 cities. *Developmental psychology*, *47*(1), 134.