

Virginia Kindergarten Readiness Program

2015-16

First Year Statewide Rollout
Data Summary Report

The Virginia Kindergarten Readiness Program

In fiscal year 2015-16, the Virginia State Legislature allocated funds for the University of Virginia (UVA) to work with the Virginia Department of Education to move toward statewide implementation of a more comprehensive kindergarten readiness assessment. The resulting initiative, Virginia Kindergarten Readiness Program (VKRP), expands the assessment of students at kindergarten entry to include the school readiness domains of mathematics, self-regulation, and social skills in addition to students' literacy skills. The additional assessments were chosen to complement the existing Phonological Awareness Literacy Screening for Kindergarten (PALS-K), which assesses children's literacy skills.

Teacher reports for fall 2015 were generated within the PALS-K/VKRP online assessment system. These reports provide information about students' school readiness across domains of math, self-regulation, and social skills at the student and classroom level.

Division and school-level reports were generated manually by the VKRP research team to provide aggregated information on kindergarten students' readiness scores in math, self-regulation and social skills at the division and school levels. These reports were delivered to each school division leader in early December. In the future, division and school-level reports will be automatically available within the PALS-K/VKRP online system.

Here, we provide a report to the Virginia Department of Education and other stakeholders that describe the data collected during the 2015-16 year. The data from this sample come from school divisions who volunteered to participate in VKRP for the 2015-16 school year. Although, the student sample was diverse, it was not selected to be representative of kindergarten students in Virginia and therefore these data cannot be interpreted as representative of students entering kindergarten in Virginia.

Assessment Overview

Math, self-regulation, and social skills assessments were administered during the fall of 2015 approximately four weeks into instruction and two weeks prior to conducting the PALS-K assessments. Some divisions were delayed due to technical issues with the online assessment system and so some teachers completed assessments later into the school year. All assessments were completed by November 6, 2015.

Math

The Early Mathematics Assessment System (EMAS), also referred to as The Birthday Party, is a research-based assessment of early mathematical thinking that draws on both modern cognitive science and developmental and educational research. The EMAS/Birthday Party, developed by Dr. Herbert Ginsburg and colleagues at Teachers College, Columbia University, measures students' mathematical knowledge in the areas of number sense, operations, shape, space, and patterning. This is a teacher-administered direct assessment where teachers use a flipbook and manipulatives to administer the assessment and enter data directly on-line. The assessment is designed to take 15-20 minutes to administer. However, due to technical issues with the application (there was often a delay going between pages in the application), the actual average assessment time was 25 minutes with 80% of assessments conducted within a single session (teachers could break up the assessment into two or more chunks) taking between 10 and 30 minutes.

Social-Emotional

The Child Behavior Rating Scale (CBRS) is a 17-item, social-emotional rating scale completed by the teacher that measures students' self-regulation (10 items) and social skills (7 items). Items are assessed

using a five-point scale (1= never, 5= always). It took 1-2 minutes per child to complete by the teacher outside of instructional time.

Literacy

Phonological Awareness Literacy Screening for Kindergarten (PALS-K) is a measure of children's knowledge of several important literacy fundamentals: phonological awareness, alphabet recognition, concept of word, knowledge of letter sounds and spelling. PALS-K provides a direct means of matching literacy instruction to specific literacy needs and provides a means of identifying those children who are relatively behind in their acquisition of these fundamental literacy skills.¹

Defining and Interpreting Fall Benchmarks

Theoretically derived benchmarks have been established for the mathematics (EMAS/Birthday Party), self-regulation (CBRS, self-regulation) and social skills (CBRS, social skills) assessments. Students falling below the benchmark on a specific assessment (i.e. math, or self-regulation, or social skills) are most likely not demonstrating the level of skills one would expect for a kindergarten student in the fall of the school year. The PALS-K benchmark is both empirically and theoretically derived and re-evaluated yearly based on statewide PALS-K data. The benchmark was established to help identify students performing below grade-level expectations that might need additional literacy instruction beyond what is typically offered in the classroom. Therefore, students meeting the PALS-K benchmark are not necessarily demonstrating the level of skills one would expect for a kindergarten student in the fall of the school year. Rather, students falling below the PALS-K benchmark do not meet the minimal level of competency necessary to benefit from typical classroom literacy instruction.²

- For mathematics, the benchmark for the EMAS/Birthday Party is set at a total score of 23. Thus, students fall below the benchmark if they receive a total score of 22 or lower on the EMAS/Birthday Party.
- For self-regulation, the benchmark for the CBRS self-regulation subscale is set at a mean score of 2.90. Thus, students fall below the benchmark if their mean score is 2.89 or lower on the CBRS self-regulation subscale.
- For social-skills, the benchmark for the CBRS social skills subscale is set at a mean score of 3.71. Thus, students fall below the benchmark if their mean score is 3.70 or lower on the CBRS social skills subscale.
- For literacy, the benchmark for the PALS-K Summed Score is set at 29. Thus, students fall below the benchmark if they receive a PALS-K Summed Score of 28 or lower.

It is important to keep in mind that the math, self-regulation, social skills, and literacy assessment tools measure students' skills along a developmental continuum. However, it is common practice to establish benchmarks (often called thresholds or cut-points) to help determine where students fall related to a standard. Benchmarks can provide a quick, first pass means of interpreting a student's scores. For instance, a student who is scoring well above the benchmark likely possesses a high level of skills within that early learning area. And, teachers should be particularly concerned about a student whose scores are falling well below the established benchmark for that early learning area. Teachers likely need to provide additional scaffolding to students falling close to the benchmark, including those who are slightly above it. Yet, whether derived theoretically or empirically, it is important to recognize that imposing a benchmark

¹ See PALS site: <https://pals.virginia.edu/rd-background.html>

² Invernizzi, M., Juel, C., Swank, L., Meier, J. (2015) PALS: Phonological Awareness Literacy Screening, K Technical Reference. Charlottesville, VA: University of Virginia Curry School of Education.
https://pals.virginia.edu/pdfs/rd/tech/K_Tech_Ref_2015.pdf

on a measure that assesses students' readiness skills provides only a rough, imprecise estimate, which can be particularly problematic for students who fall just above or below a particular benchmark or threshold.

For example, a student scoring a 23 on the EMAS/Birthday Party is likely to be very similar in terms of math skills to a student scoring a 22 on the EMAS/Birthday Party even though the student who scored a 23 technically met the benchmark for math at the fall of kindergarten and the student who scored a 22 did not. *For these reasons, we do not recommend using whether or not a student is above or below the benchmark as the sole criterion for understanding his or her early learning within a domain.* **For all students, continual progress monitoring is critical as students develop skills at different rates and respond differentially to instruction and scaffolding within the school year.**

In the pages below, you will find summary statistics for the Fall 2015 administration of these assessments.

Sample Description

VKRP partnered with 21 school divisions in fall 2015 for an overall student enrollment of 9,809 kindergarten students (includes all kindergarten students who were entered on classroom rosters within the PALS-K/VKRP system). Figure 1 displays each divisions' contribution to the total sample (division names have been removed) and Table 1 provides a demographic description of the total sample.

Figure 1: Overall Study Enrollment

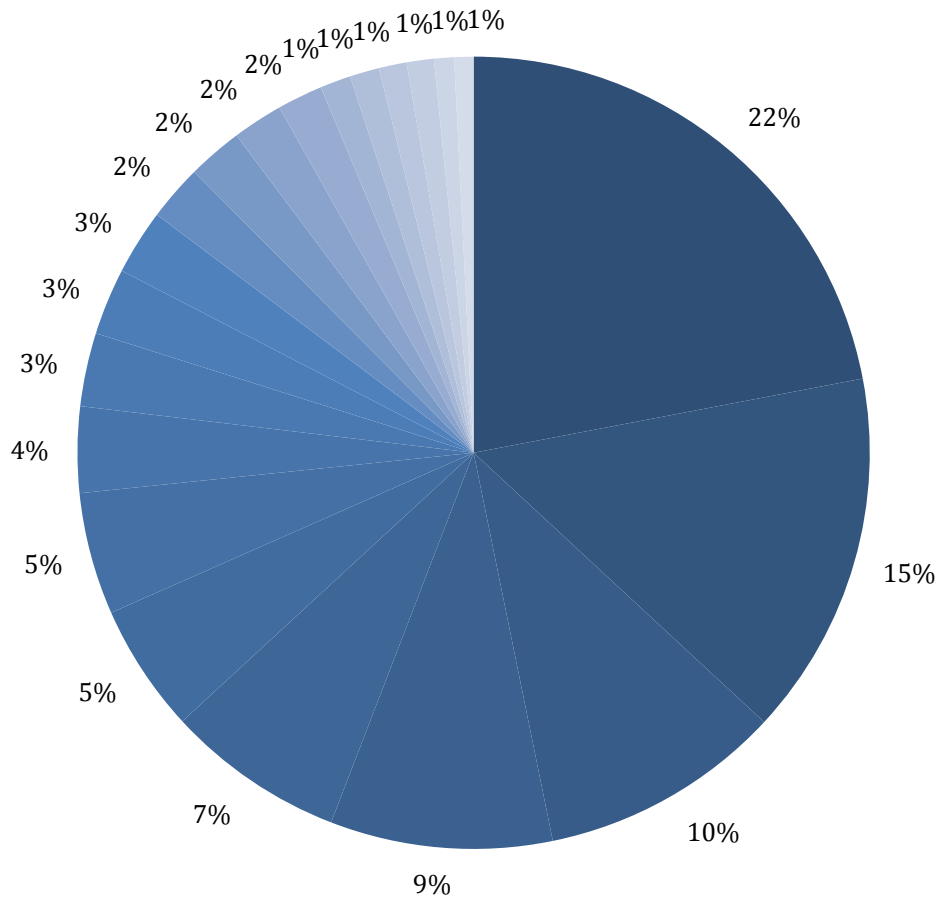


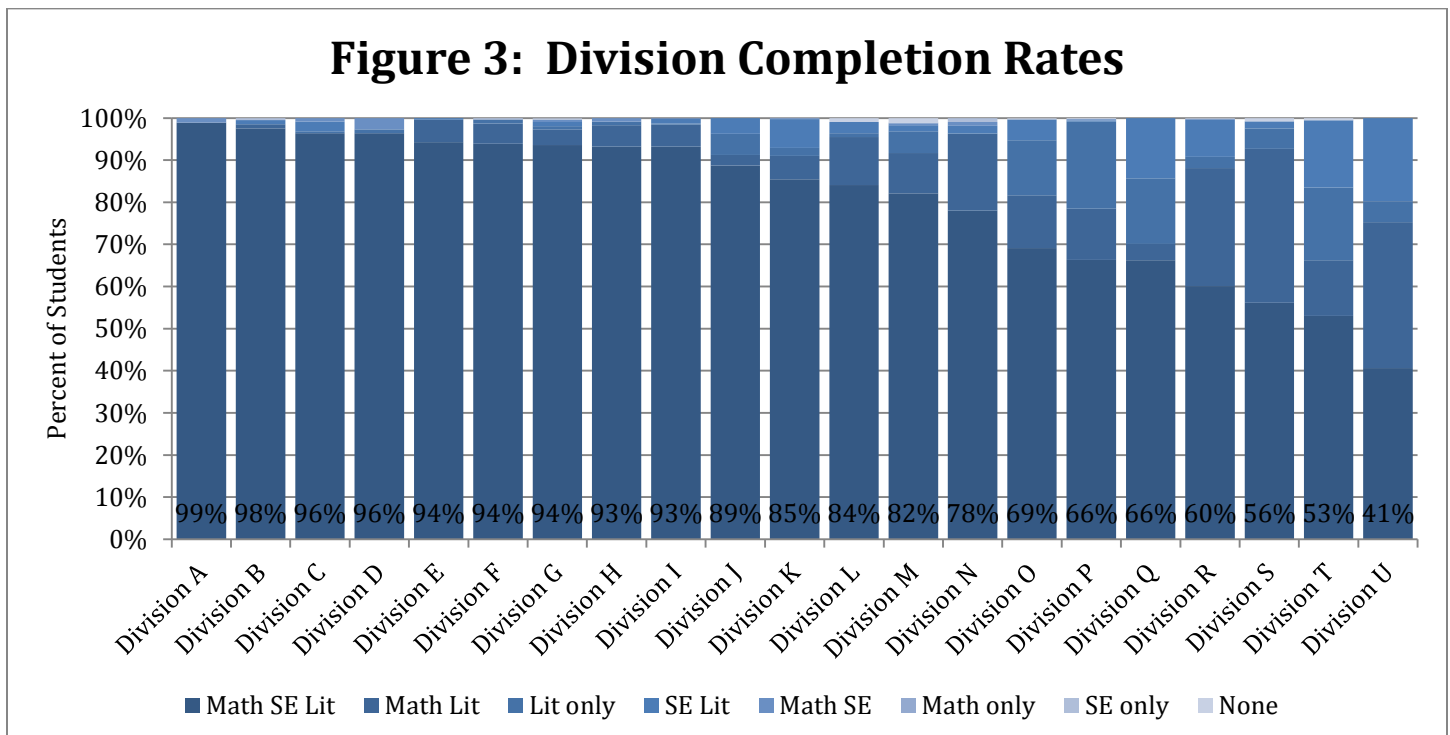
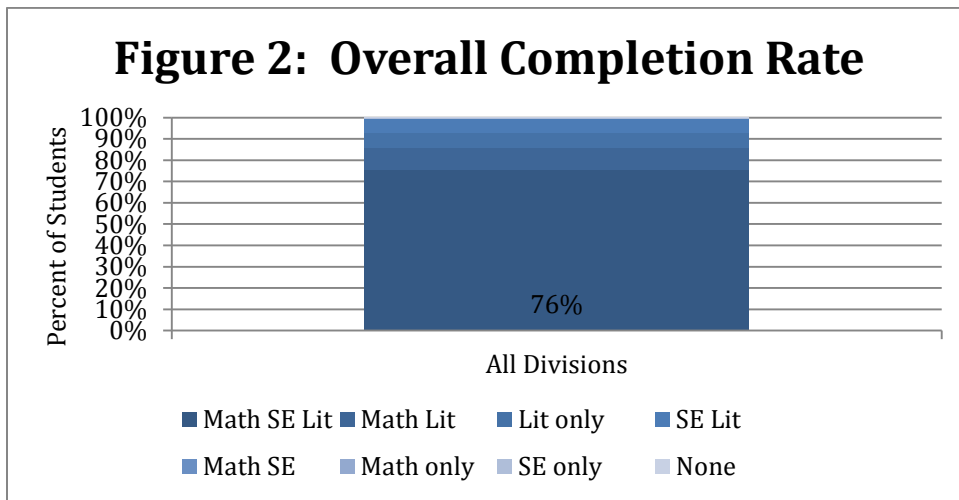
Table 1: Demographic Characteristics

	<i>n</i>	Mean (SD)/Percent
School-level SES		
% Free and Reduced Lunch	9382	41.2 (19.0)
Child Age in months		
September 1, 2015	9748	65.1 (4.26)
Gender		
Male	4946	50.7%
Ethnicity		
Black	2144	22.0%
Native American	63	0.6%
White not Hispanic	5632	57.8%
Hispanic	1360	14.0%
Asian	189	1.9%
Multiple	360	3.7%
Disability status		
None	9128	93.6%
Speech/Language Impairment	261	2.7%
Developmental Disability	236	2.4%
Other Disability	123	1.3%
Attended preschool		
No	1115	11.4%
Yes	8467	86.9%
Unsure	166	1.7%

Results

Completion Rate

Math, social-emotional (SE), and literacy assessments (EMAS/Birthday Party, CBRS, and PALS-K) were completed separately and not all students were assessed with all measures. In both figures below, the full completion (students assessed for math, self-regulation, social skills, and literacy) rate is dark blue with the percent noted at the bottom of the bar graph. Figure 2 displays the completion rates for the total sample. Across all participating divisions, 76% of kindergarten students were assessed across math, self-regulation, social skills, and literacy. In addition, 10% were only assessed in math and literacy, 7% were only assessed in literacy, and 6% were only assessed in self-regulation, social skills, and literacy. Students assessed in math, self-regulation, and social skills, math-only, self-regulation and social skills only, and students not assessed in any domain accounted for less than 1% of the total sample. Completion rates for divisions are shown in descending order (i.e., highest completion to lowest completion) in Figure 3.



State and Division Summary

Figure 4 displays a summary of how students scored in terms of meeting or falling below the benchmark (see Page 1 for an explanation of how benchmarks were derived) in math, self-regulation, social skills, and literacy. Figures 5, 6, 7, and 8 display this information separated by learning domain alongside data for all divisions. Please note that divisions are displayed in descending order of skill level (i.e., divisions with fewer students falling “below benchmark” appear first) and division labels correspond to division labels appearing in Figure 3.

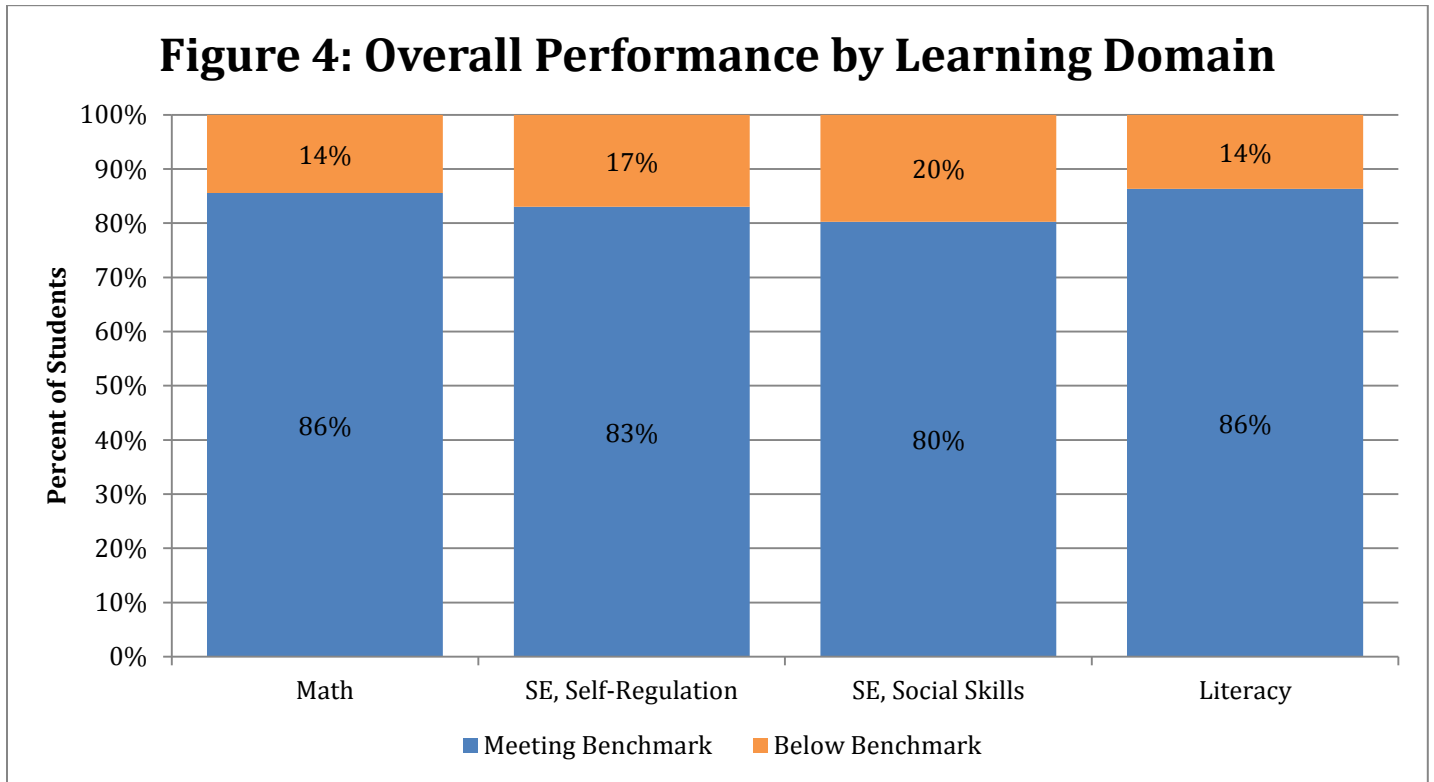


Figure 5: Math Performance

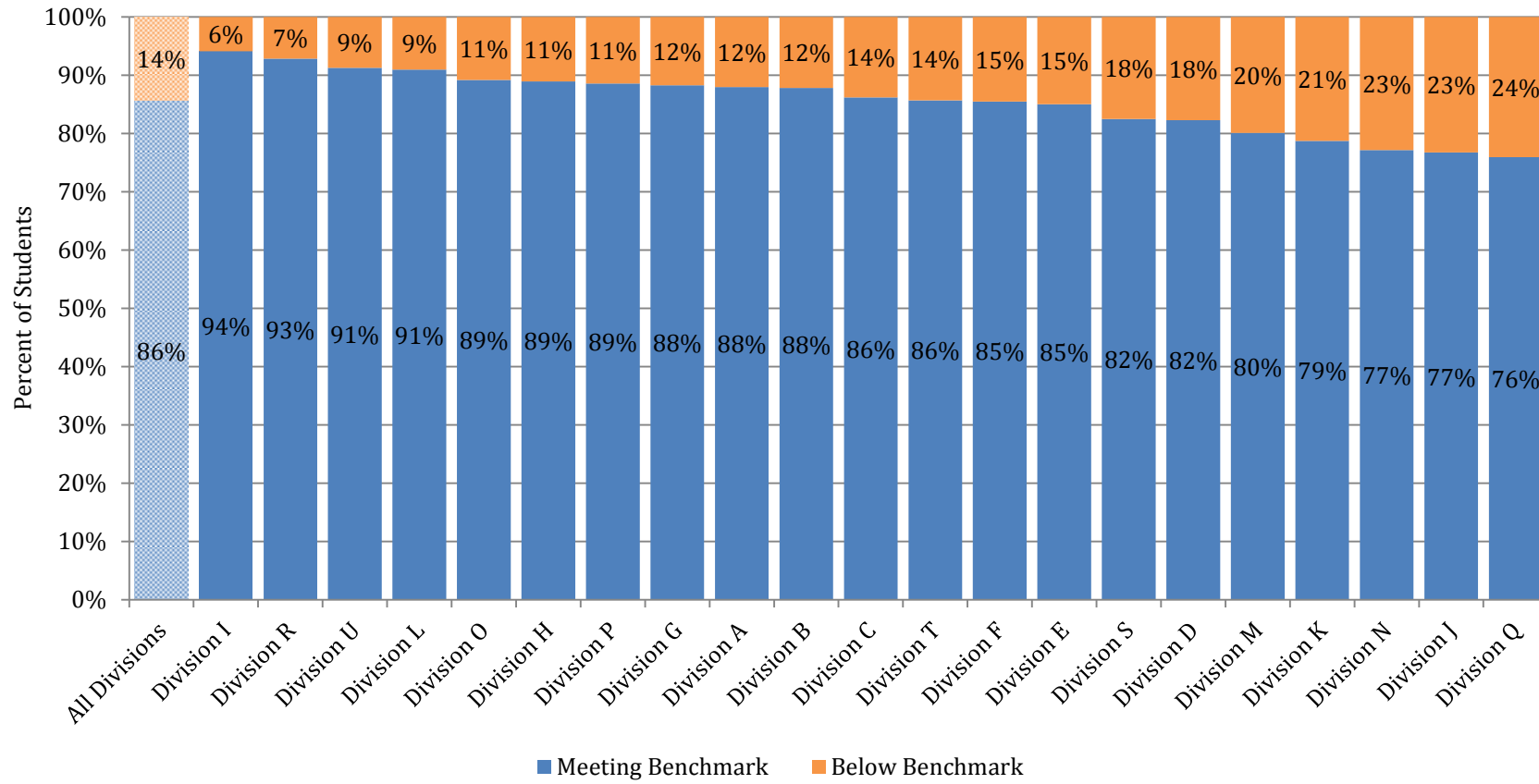


Figure 6: Social-Emotional Performance, Self-Regulation

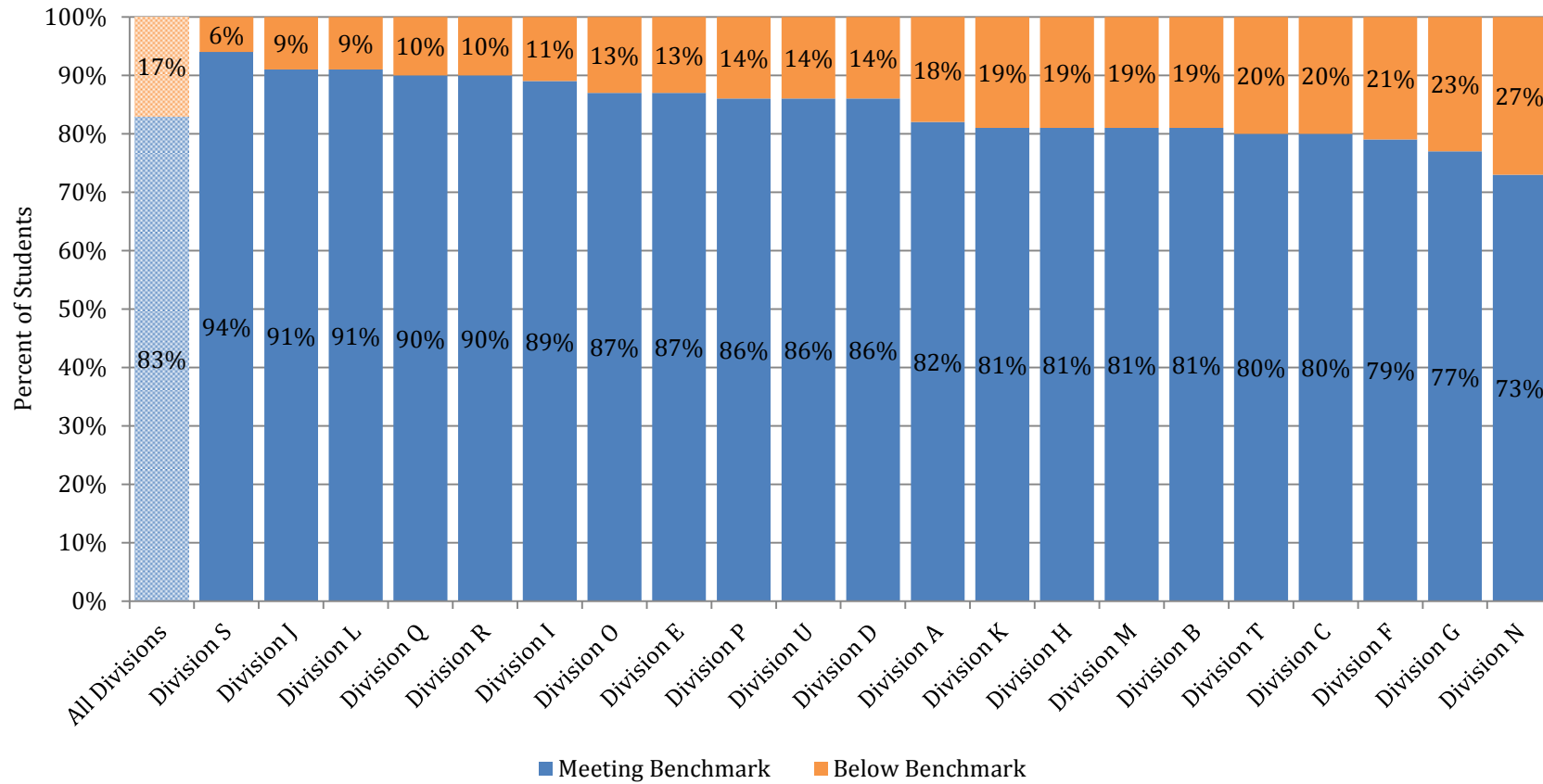


Figure 7: Social-Emotional Performance, Social Skills

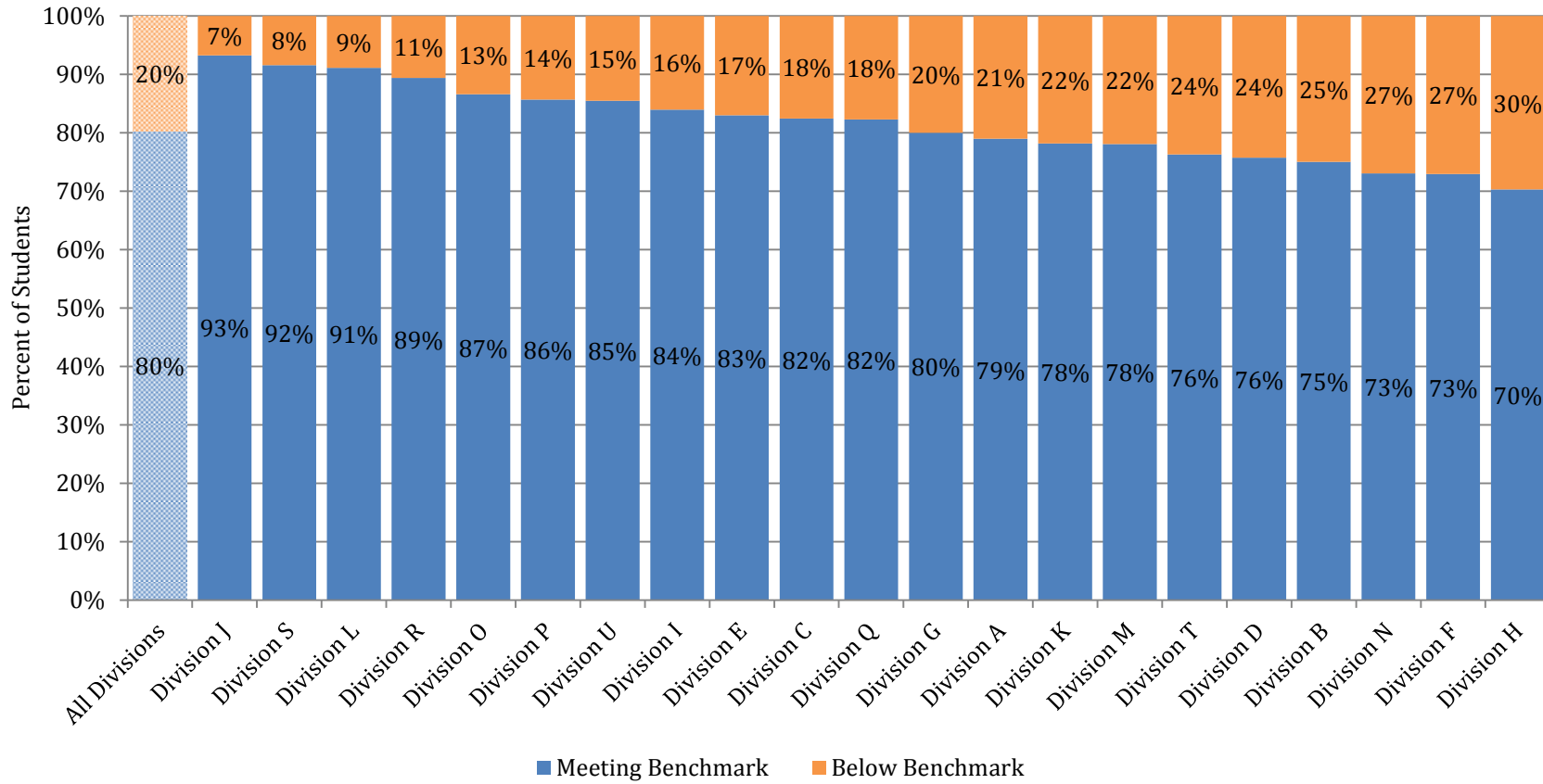


Figure 8: Literacy Performance

