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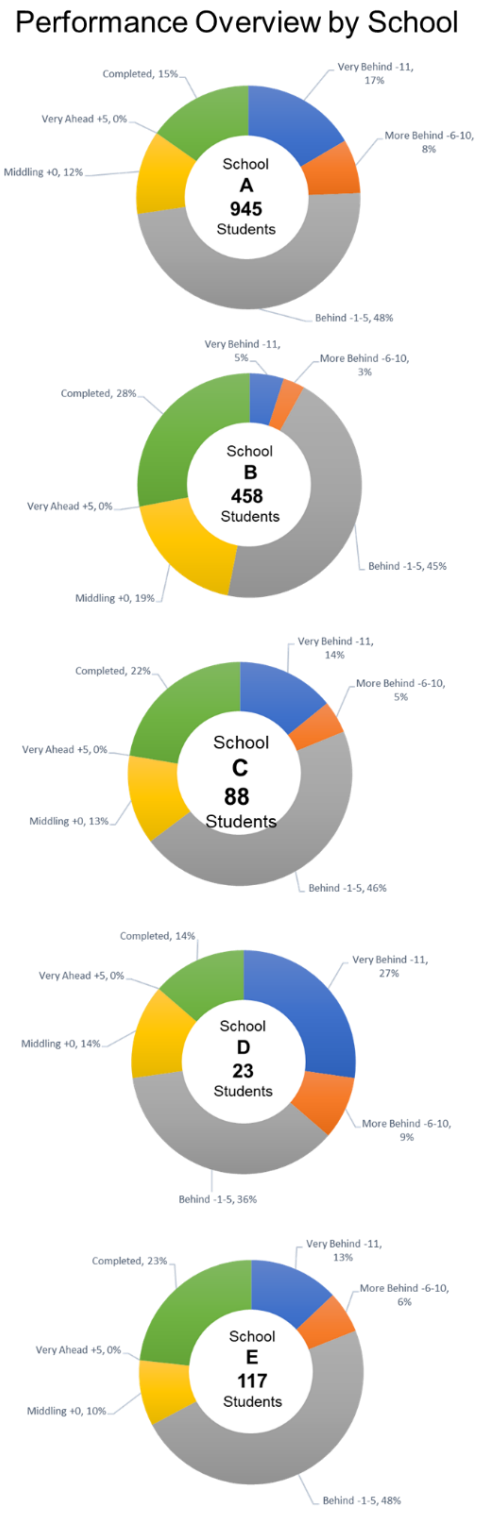
Rapid Analysis Report

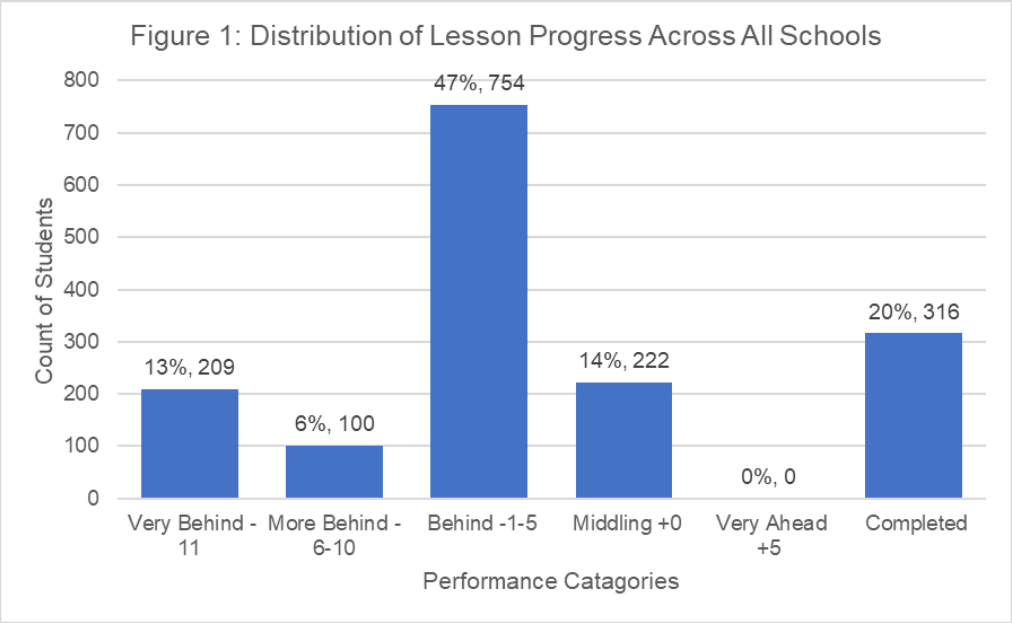


The data set provided to conduct this rapid analysis contains 30 observations across eight variables. The data comes from five schools (A, B, C, D and E) and records the number of sections each school offers and the number of students that have achieved certain levels of progress in completing a given amount of assignments. Depending on a given student's progress, they have been binned in the following ordinal list: ahead (more than 5 lessons ahead), middling (5 lessons ahead to 0 lessons ahead), behind (1 to 5 lessons behind), more behind (6 to 10 lessons behind), very behind (more than 10 lessons behind), and completed (finished with the course). There are 35 lessons in this math course and the data was collected at the 75% course completion mark.

The first question that should be answered relates to the programmatic performance of the new math course. The beginning of any new program often serves as a calibration or validation period as program evaluators make assessments on program performance. In this case that would translate to determining if the new math course was too difficult, to easy, or about right for students. Answering this question requires uncovering where the course falls on a distribution across all participating schools. One would expect to see a relatively normal distribution around an amount of progress that keeps most students on pace for completion. Too many students ahead may suggest the course is not challenging enough, while too many students behind may suggest the course is too difficult. In this case, and as seen in Figure 1 on page 2, the bar chart helps show that 66% of students across all schools are below the average completion rate. That said, the broad discretization of the progress milestones challenges the fidelity of the measure since the category "behind" (which consists of 47% of the students) may be as little as one lesson behind or as

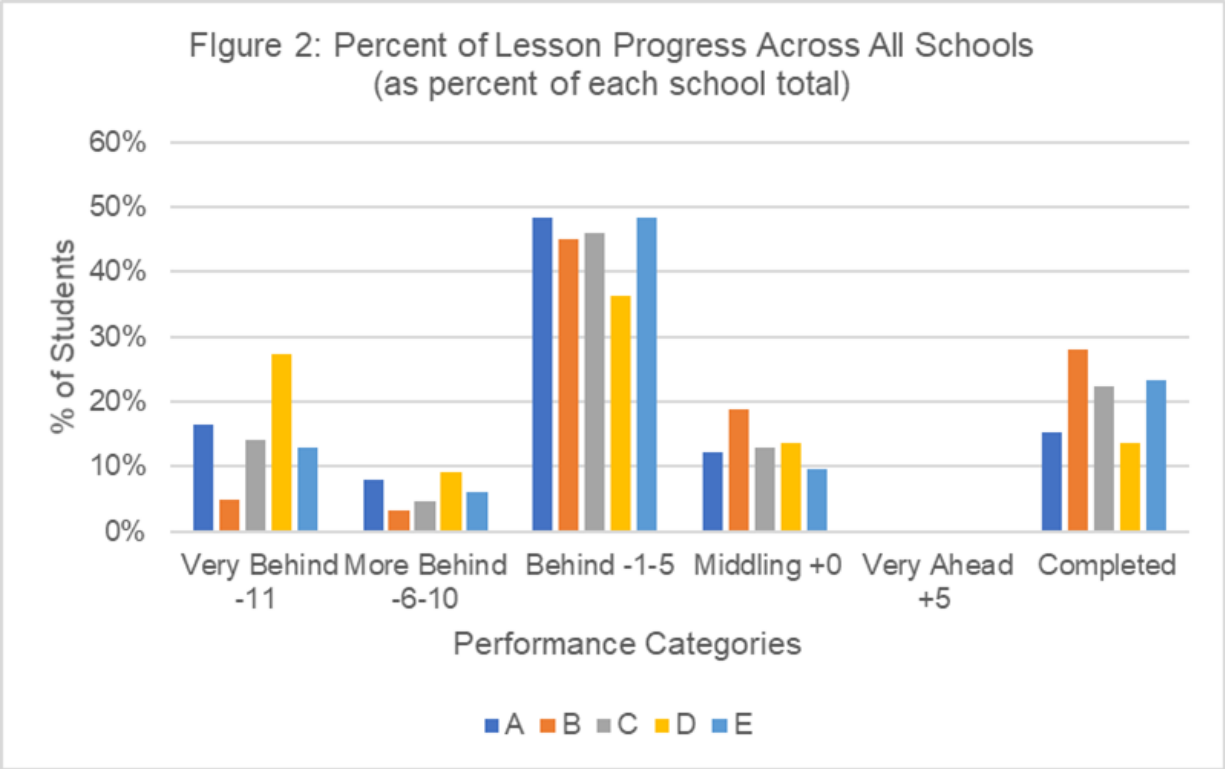
many as 5 lessons behind. Interestingly, the distribution also shows that for 20% of the students, the lessons may not have been challenging enough as they are categorized as “completed” despite the semester being only 75% complete.

Figure 1:



Next, if we look at each school’s performance as a percent of total student participating in the course at each school, we see that the schools generally perform about the same with most students behind on assignments (see figure 2 on page 3). A concerning data point seen in the visualization is that school D seems to be the worst performing as it has both the highest proportion of its students “very behind” and also has the lowest proportion of its students in the “completed” category. Conversely, school B appears to be the top performer as it has the lowest proportion of its students in the “very behind” category and the highest proportion of its students in the “completed” category. School B also has the highest proportion of its students in the “middling” category, with the highest percent, totaling to 47% of students at or above “middling.”

Figure 2:



Measuring the difference between the percent of students performing at “middling” and above, and subtracting that from the percent of students performing at “behind’ and below provides a measure of performance at each school and highlights the spread of the performance range. As seen in Table 1 below, proportionally, no school has more students on or above pace than they do behind pace.

Table 1:

As percent of each school							
	Very Behind -11	**More Behind -6-10**	**Behind -1-5**	**Middling +0**	**Very Ahead +5**	**Completed**	**Upper Performance minus Lower Performance**
A	17%	8%	48%	12%	0%	15%	**-0.45**
B	5%	3%	45%	19%	0%	28%	**-0.06**
C	14%	5%	46%	13%	0%	22%	**-0.29**
D	27%	9%	36%	14%	0%	14%	**-0.45**
E	13%	6%	48%	9%	0%	23%	**-0.34**

However, some of this difference in this range of performance can be explained by several high performing section within the schools. For example, in School B, there are three sections—6, 12, and 10—who are outperforming all other sections across all schools. Each one of these sections is producing more upper performance (“middling” to “completed”) than lower performance (“behind” to “very behind”) students. The difference is even more pronounced for these sections at school B when viewing only each end of the spectrum, (“completed” vs. “very behind”). Further investigation should

be conducted to which teachers are teaching those session to identify potential strategies they are using to achieve such results.

In summary, the data shows that at the 75% completion mark of this course, most students are falling behind. What the data does not show is the reason why. It could be that the course is too difficult for most students, or it could be that the course is new and some teachers have yet to figure out the correct pace in which to teach and administer this new course. In either case, additional study and data collection is required to better understand and contextualize the data.

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