

Curriculum Associates RESEARCH

Variation in Attainment of *i-Ready* Stretch Growth[®] in Reading and Mathematics: What Can We Learn from Students' Usage of *i-Ready* Personalized Instruction?

Reading and Mathematics
Research Brief, 08.01.2023

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Summary

To better understand instructional practices that may aid in students' attainment of Stretch Growth or grade-level placement, we explored differences in *i-Ready Personalized Instruction* (i.e., *i-Ready PI*) usage among students who met and did not meet Stretch Growth targets. Our descriptive analyses found that for both reading and mathematics, elementary and middle school students who met Stretch Growth spent more average weekly time on *i-Ready PI* and completed more unique lessons than did students who met only Typical Growth or who met neither growth target. Further, when evaluated by *i-Ready PI* usage recommendations, we generally see proportionally more students meet Stretch Growth targets when using *i-Ready PI* as recommended compared to students who did not meet usage guidelines. Examining by placement level, we see students in Grades 1–7 who began Year 1 Two or More Grade Levels Below, but who were performing on grade level two school years later, generally averaged more total hours of *i-Ready PI*, for more distinct weeks, and completed more unique lessons, year over year, than did peers who remained below grade level at the end of the second school year.

Introduction

Each school year, teachers must manage competing demands in the classroom and must balance time, attention, and instruction to meet multiple priorities and varied student needs. In many classrooms throughout the US, the pandemic exacerbated existing gaps between learners, resulting in even greater disparity among students' academic needs (Curriculum Associates, 2021; Dawson, 2022). In turn, this has intensified the urgency for responding to unfinished learning. Schools are increasingly turning to personalized learning programs, high-dosage tutoring, and other instructional programs to help students reach grade-level proficiency.

Previous research has demonstrated that for most students whose reading or mathematics performance is more than one grade level below in fall, Typical Growth will not be adequate to accelerate their learning to meet grade-level standards (Curriculum Associates, 2023). For these students, ambitious yet attainable growth targets are essential to helping them embark on a path to grade-level proficiency. This study attempts to provide insights by examining variation in students' growth and placement on a criterion-referenced assessment of reading and mathematics and corresponding trends in students' usage of personalized online instruction over two years.

In this study, we examined students' usage of *i-Ready* PI for Reading and for Mathematics in terms of the amount of time spent on *i-Ready* PI lessons, the number of weeks within the school year, and the number of unique lessons completed. In our analyses, we direct close attention to those students who begin their school year below grade level relative to their chronological grade standards, as well as students in critical grade cohorts for skill development in reading and mathematics.

Research Methodology

Research Questions

This study addresses the following research questions:

1. How do measures of *i-Ready Personalized Instruction* usage vary between students who meet Stretch Growth, Typical Growth, or neither in Year 1 or in Year 2 of the study? Specifically, how does Stretch Growth attainment vary among students who met or did not meet *i-Ready* PI usage recommendations?
2. How do measures of *i-Ready Personalized Instruction* usage vary between students who reach grade-level placement at the end of two years and those who do not?

Sample

The study used data from more than 3 million students who completed the *i-Ready Diagnostic* for Mathematics and more than 2.4 million students who completed the *i-Ready Diagnostic* for Reading during the fall and spring testing windows of the 2021–2022 and 2022–2023 school years. Students were in Grades K–7 in Year 1 (i.e., Y1) and Grades 1–8 in Year 2 (i.e., Y2). Students were included if they attended a school with at least five student observations per grade level and if they had completed at least one *i-Ready* PI online lesson between their fall and spring Diagnostics each year (Curriculum Associates, 2023). The *i-Ready Diagnostic* for Mathematics has an assessment in Spanish. For this study, only students who completed the Diagnostic for

Mathematics in English were included. For our descriptive analyses, we divided students into three groups based on their initial placement level in the fall of Y1 for Mathematics and for Reading: Early On Grade Level or Above, One Grade Level Below, or Two or More Grade Levels Below.

i-Ready Growth Measures

For each subject, *i-Ready* assigns each student a Stretch Growth target and a Typical Growth target that is based on the student's chronological grade and overall placement level on the fall Diagnostic. An *i-Ready* Typical Growth target is the median scale score growth over the school year for students at a given grade and fall placement level. It can be used to understand how much individual students or groups of students are growing compared to an average student nationally, for instance, to identify students who are lagging or surpassing median growth. A Stretch Growth target is an ambitious but attainable goal for student growth. Stretch Growth targets were determined based on observations of growth of a national sample of students who started at each placement level and achieved grade-level proficiency over time. Stretch Growth measures represent well-above-average growth, but do not exceed the 80th percentile of growth for students in any given placement.

In this study, students were designated as Met Stretch Growth if their observed growth was greater than or equal to their Stretch Growth target. Students who did not meet Stretch Growth but met or exceeded their Typical Growth target are designated as Met Typical Growth. Students who met neither target are designated as Met Neither.

i-Ready Personalized Instruction

Online lessons in *i-Ready* PI provide students with opportunities to receive explicit instruction, systematic practice, and scaffolded feedback across a full scope of Grades K–8 mathematics and reading concepts. There are hundreds of lessons aligned with grade-level standards in each of the four math domains: Number and Operations, Algebra and Algebraic Thinking, Geometry, and Measurement and Data, and in each of five reading domains: Phonological Awareness, High-Frequency Words, Phonics, Vocabulary, and Reading Comprehension. Immediately after a student completes the *i-Ready Diagnostic*, their automated lesson path (i.e., My Path) is generated based on performance in each domain. A student will begin *i-Ready* PI in the domain in which they placed lowest and work through domains and levels in a specific priority order. Once a student completes a subsequent Diagnostic, *i-Ready* will use the new data to determine whether any of the domain-specific lesson paths need to be adjusted. In addition to the automated My Path, teachers can choose to assign specific *i-Ready* PI lessons to students. Students have simultaneous access to Teacher-Assigned and My Path lessons through their *i-Ready* student dashboard.

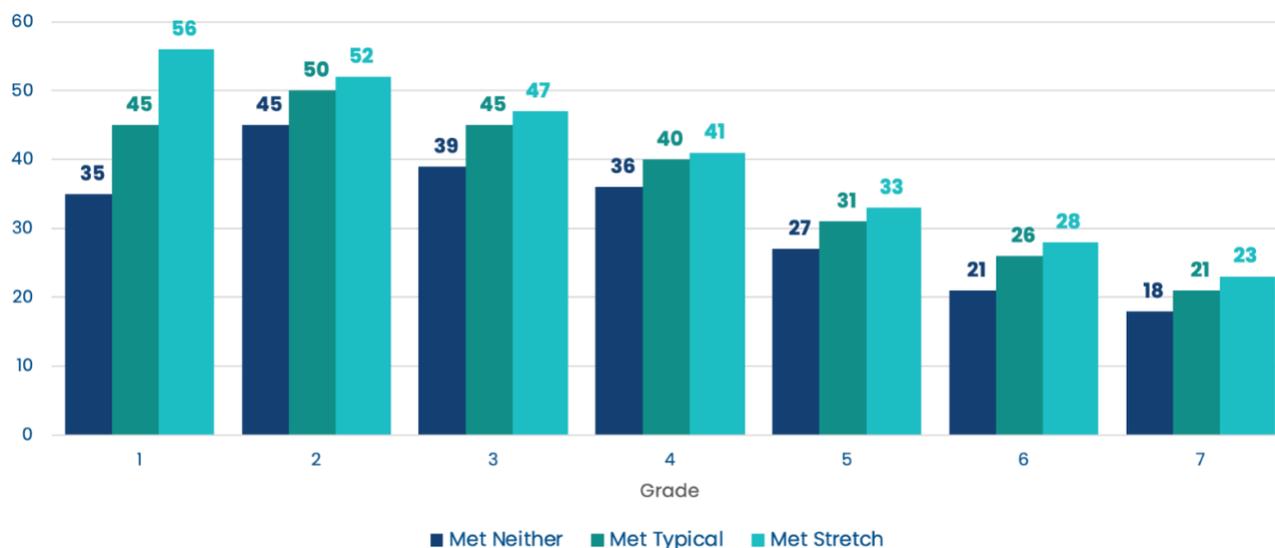
Reading Results

i-Ready Instruction and Growth

Time-on-Task. Across all grades, and all placement levels, students who met Stretch Growth in Y1 completed more hours of *i-Ready* PI than students who met only Typical Growth, and students who met Typical Growth spent more hours than students who met neither growth target (Table A1). Though differences between groups are small, these trends are consistent across grade, placement levels, and subjects. These trends held steady for Y2 with only small exceptions in Grade 8 (Table A2).

Unique Lessons Completed. Across both years, all grades, and all fall placement levels, students who met Stretch Growth in reading completed, on average, more unique lessons in *i-Ready* PI than students who met Typical Growth or neither growth target (Tables A5 and A6). Examining students who began the school year Two or More Grade Levels Below, these differences appear more pronounced between younger grades when compared to older grades (Figure 1).

Figure 1: Median Unique Reading Lessons Completed by Grade Level and Growth Target Achieved for Students Beginning Y1 Two or More Grade Levels Below

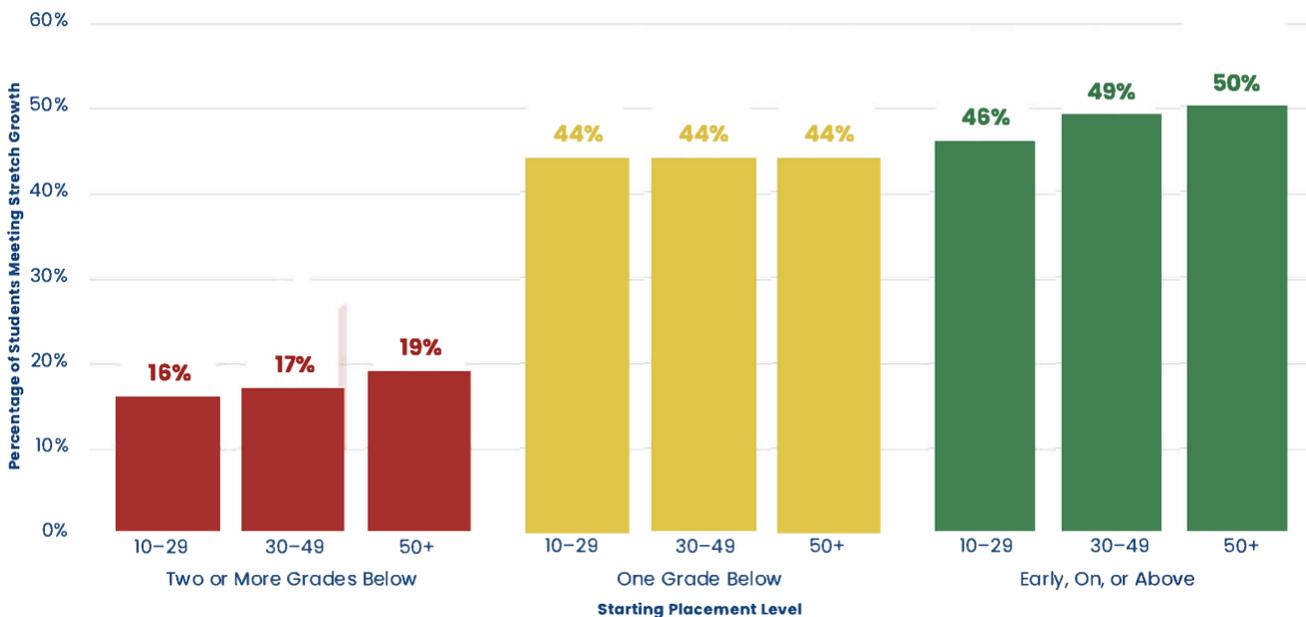


Achieving *i-Ready* Usage Guidelines. *i-Ready* PI usage recommendations suggest students should use *i-Ready* PI for 30–49 minutes per subject per week consistently across the school year (typically a minimum of 18 weeks). All subsamples were first filtered by students who had used *i-Ready* PI for a minimum of 18 distinct weeks, with at least a 70% pass rate, and then examined by ranges of usage.¹ Across all Y1 fall placement levels, groups with higher average weekly minutes spent on *i-Ready* PI generally saw a greater percentage of students who met Stretch Growth. For most groups, we saw proportionally more students meet Stretch Growth targets in groups that met weekly *i-Ready* PI usage criteria (i.e., 30–49 minutes per subject per week consistently throughout the school year) than groups who did not meet weekly usage targets (Tables A9 and A10).

¹Curriculum Associates uses the ranges of 1–9, 10–29, 30–49, 50+ weekly minutes for reporting student usage. As very few students in the sample used *i-Ready* for fewer than 10 minutes, these students are excluded from all tables and figures.

Grades 2–3 Spotlight. In reading, we chose to highlight the Grades 2–3 cohort (Curriculum Associates, 2023). Similar to the other grade cohorts, we see students who met Stretch Growth generally spent more time on *i-Ready* PI and completed more unique lessons. Specifically examining students who began Grade 2 at Two or More Grade Levels Below in reading, we see those who met Stretch Growth in Y1 used *i-Ready* PI for 2.8 more hours over the year and completed seven more unique lessons than did students who met neither growth target. Examining this cohort by *i-Ready* PI usage guidelines, we see similar trends. In Grade 3 reading, a higher percentage of students met Stretch Growth as the range of weekly usage increased (with a small exception for students beginning One Grade Level Below) (Figure 2)

Figure 2: Grade 2 Students Who Met Stretch Growth in Reading by Weekly Time-on-Task in Y1



Note: In Figure 2, all students have a pass rate of 70% or higher and have used *i-Ready* PI for at least 18 distinct weeks or more.

Disaggregated by fall placement level, we see an expected decline in the total percentage of students achieving Stretch Growth with lower placement levels, but we again see an incremental and steady increase in the percentage of students meeting their Stretch Growth goal in most placement levels with an increase in the range of weekly usage.

i-Ready Instruction and Placement Level

To further explore paths for scaling students to grade-level proficiency, we also examined *i-Ready* PI usage and corresponding trends in *change in placement level* over two years. In fall 2021, 34% of students in Grades 1–7 (n = 746,939) began the school year Two or More Grade Levels Below in reading. Of students in this group who met their Stretch Growth targets two years in a row (n = 40,391), 62.8% ended the school year at Early On Grade Level or Above. Exploring *i-Ready* PI usage among these students revealed that across Grades 1–7, students in this group generally spent, on average, more time on *i-Ready* PI, completed more unique lessons, and used *i-Ready* PI for more

distinct weeks of the school year than students who ended Y2 below grade level (with some exceptions, as seen in Tables A13, A14, and A15).

Grades 2–3 Spotlight. Examining the Grades 2–3 cohort for reading, we see similar trends. Across all Grade 2 Y1 fall placement levels, students who ended Grade 3 at Early On Grade Level or Above spent more hours on PI, for more distinct weeks, and completed more unique lessons in reading than did students who ended Grade 3 at Two or More Grade Levels Below (Table 1).

Table 1: Change in Placement Level and *i-Ready* Reading Instruction Usage for Grades 2–3 over Y1 and Y2

Y1 Fall Placement Level	Y2 Spring Placement Level	N	Y1 Median Total Hours	Y2 Median Total Hours	Y1 Median Distinct Weeks	Y2 Median Distinct Weeks	Y1 Median Unique Lessons	Y2 Median Unique Lessons
Early On Grade Level or Above	Early On Grade Level or Above	94,607	16.82	15.51	26	25	48	40
	One Grade Level Below	755	14.72	12.02	25	23	38	24
	Two or More Grade Levels Below	131	14.25	12.78	23	23	36	25
One Grade Level Below	Early On Grade Level or Above	140,503	16.47	15.73	26	25	51	37
	One Grade Level Below	28,026	15.51	14.43	25	24	45	37
	Two or More Grade Levels Below	7,110	14.01	12.74	24	23	40	34
Two or More Grade Levels Below	Early On Grade Level or Above	34,466	15.37	15.62	25	25	52	42
	One Grade Level Below	36,451	14.82	14.94	25	25	50	42
	Two or More Grade Levels Below	60,392	13.43	13.74	23	24	45	39

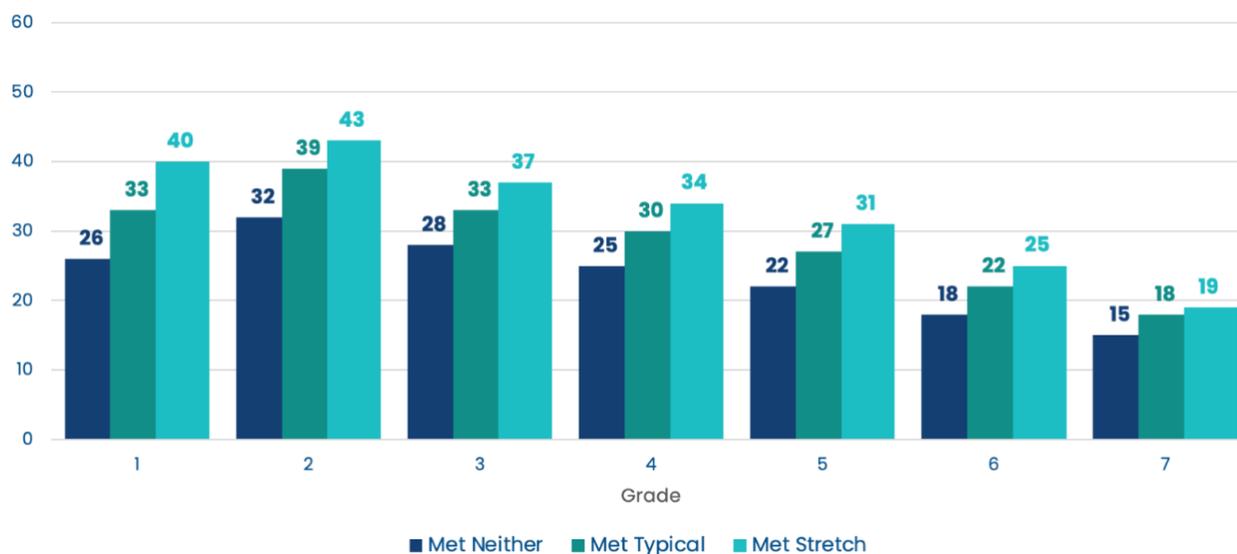
Mathematics Results

i-Ready Instruction and Growth

Time-on-Task. Examining the total number of hours spent in online instruction over the full school year and corresponding growth patterns, we again see students who met Stretch Growth in mathematics spent more total hours on *i-Ready* PI than students who met only Typical Growth. Further, students who met Typical Growth spent more hours than students who met neither growth target (Tables A3 and A4).

Unique Lessons Completed. The findings for mathematics are similar to those for reading. In both years, across Grades K–7 and all fall placement levels, students who met Stretch Growth completed, on average, more unique lessons in mathematics than students who met only Typical Growth or met neither growth target (Tables A7 and A8). When examining only students who began the school year at Two or More Grade Levels Below, a similar trend emerged (Figure 3). Those students who met Stretch Growth completed more unique lessons in *i-Ready* PI than did students who met only Typical Growth or neither growth target.

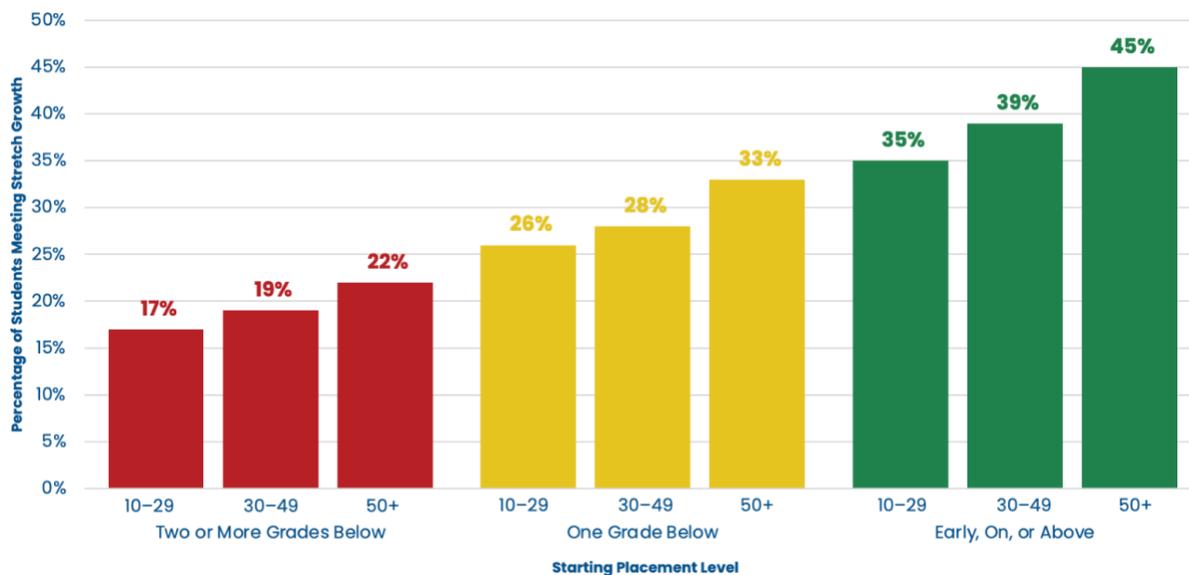
Figure 3: Median Unique Mathematics Lessons Completed by Grade Level and Growth Target Achieved for Students Beginning Y1 Two or More Grade Levels Below



Achieving *i-Ready* Usage Guidelines. In mathematics, we saw nearly identical trends as in reading. When *i-Ready* PI usage targets were met, we saw proportionally more students achieve Stretch Growth than students who did not meet weekly usage guidelines (Tables A11 and A12). As the weekly usage range of *i-Ready* PI increased, regardless of Y1 placement level, we saw proportionally more students meeting Stretch Growth, in both years, with slight exceptions in Grades 6 and 7 in Y2.

Grades 4–5 Spotlight. In mathematics, we chose to spotlight the Grades 4–5 cohort (Curriculum Associates, 2023) and identified similar trends, with students meeting Stretch Growth demonstrating more time-on-task and a greater number of lessons completed than students who did not achieve Stretch Growth. Examining the sample of Grade 4 students who began Two or More Grade Levels Below in mathematics, specifically, we see those who met Stretch Growth in Y1 used *i-Ready* PI for 3.4 more hours over the year and completed nine more unique lessons than students who met neither growth target. When evaluated by *i-Ready* PI usage guidelines, regardless of fall placement levels, we see there were proportionally more students who met their Stretch Growth target in mathematics as the range of weekly usage increased (Figure 4). When disaggregated by fall placement level, though we see an expected decline in the total percentage of students achieving Stretch Growth with lower placement levels, we again see an incremental but steady increase in the percentage of students meeting their Stretch Growth goal as the range of weekly usage increased.

Figure 4: Grade 4 Students Who Met Stretch Growth in Mathematics by Weekly Time-on-Task in Y1



Note: In Figure 4, all students have a pass rate of 70% or higher and have used *i-Ready* PI for at least 18 distinct weeks or more.

i-Ready Instruction and Placement Level

In fall 2021, 35% of students in Grades 1–7 (n = 945,538) began the school year Two or More Grade Levels Below. For students in this group who met their Stretch Growth targets two years in a row (n = 42,035), 67.6% ended the school year at Early On Grade Level or Above. Exploring *i-Ready* PI usage among these students revealed that across Grades 1–7, students in this group spent, on average, more time on *i-Ready* PI, completed more unique lessons, and used *i-Ready* PI for more distinct weeks of the school year than students who ended Y2 below grade level (with slight exceptions in Grades 6 and 7, Tables A16, A17, and A18).

Grades 4–5 Spotlight. Of the Grade 4 students who began the year Two or More Grade Levels Below in mathematics, those who ended Grade 5 at Early On Grade Level or Above, spent, on average, more hours on *i-Ready* PI (2.9 more hours in Y1 and 5.1 more hours in Y2), completed more unique lessons (five more lessons in Y1 and seven more lessons in Y2), and used *i-Ready* PI for more distinct weeks of the school year (three more weeks in both years) than students who remained Two or More Grade Levels Below at the end of Grade 5 (Table 2).

Table 2: Change in Placement Level and *i-Ready* Mathematics Instruction Usage for Grades 4–5 over Y1 and Y2

Y1 Fall Placement Level	Y2 Spring Placement Level	N	Y1 Median Total Hours	Y2 Median Total Hours	Y1 Median Distinct Weeks	Y2 Median Distinct Weeks	Y1 Median Unique Lessons	Y2 Median Unique Lessons
Early On Grade Level or Above	Early On Grade Level or Above	86,263	16.57	17.17	25	25	35	31
	One Grade Level Below	1,616	13.92	12.33	23	21	26	19
	Two or More Grade Levels Below	88	13.32	10.81	21	19	20.5	16.5
One Grade Level Below	Early On Grade Level or Above	146,320	15.76	17.26	25	25	34	29
	One Grade Level Below	59,906	13.80	14.08	23	23	27	23
	Two or More Grade Levels Below	6,695	12.49	11.15	22	20	23	17
Two or More Grade Levels Below	Early On Grade Level or Above	23,594	14.69	17.38	24	25	32	31
	One Grade Level Below	71,409	13.40	14.83	23	23	28	26
	Two or More Grade Levels Below	84,445	11.82	12.25	21	22	27	24

Conclusion

This study examined students' use of *i-Ready Personalized Instruction* among students with varying growth and placement patterns to further understand instructional practices associated with achieving Stretch Growth or grade-level placement. Teachers need support in accelerating students' learning to move from unfinished learning to proficiency. Accomplishing this means knowing what growth is needed to achieve grade-level proficiency and providing viable learning paths to get there. In this study, over two school years, there was a positive trend, across all grades between greater usage of *i-Ready* PI and a greater proportion of students achieving grade-level placement or Stretch Growth goals in both reading and mathematics.

Across all grades, subjects, and fall placement levels, students who met Stretch Growth generally spent more time on *i-Ready* PI and completed more unique lessons than students who met Typical Growth or neither growth target. Similarly, students who followed *i-Ready* PI usage guidelines had a higher proportion of students meeting Stretch Growth in almost all groups. Examining, specifically, students who began Y1 Two or More Grade Levels Below, we see encouragingly, similar trends. Beyond attaining Stretch Growth, students who begin Y1 Two or More Grade Levels Below but achieve grade-level placement in Y2 again, generally, spend more time in *i-Ready* PI, for more distinct weeks and complete more distinct lessons than students who did not reach grade-level placement. These results suggest *i-Ready* PI may be a viable path for attaining Stretch Growth and eventual grade-level placement for learners requiring the most support to reach grade-level content.

The *i-Ready* PI usage guidance provides educators with guardrails for the weekly and yearly amount of *i-Ready* PI usage for which to strive. The data in this report yield a useful trend—there is a greater percentage of students who meet Stretch Growth targets and achieve grade-level placement among students who meet the *i-Ready* PI usage guidance than among students who do not. Understanding the differences in *i-Ready* PI usage between students who met Stretch Growth or reached grade level and students who did not can provide valuable insights to educators whose goal is to help students achieve either target. Utilizing *i-Ready* PI as recommended—with consistency each week and across the school year, and ensuring students are completing and passing more lessons to practice needed skills (Curriculum Associates, 2022)—is an actionable goal that educators can strive to implement in their classrooms.

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Appendix

Table A1: Median Hours of *i-Ready* PI in Reading in Y1 by Fall Placement Level and Growth Achieved

	Median Hours of PI in Y1								
	Y1 Fall: Early On Grade Level or Above			Y1 Fall: One Grade Level Below			Y1 Fall: Two or More Grade Levels Below		
Y1 Grade	Met Stretch Growth	Met Typical Growth	Met Neither	Met Stretch Growth	Met Typical Growth	Met Neither	Met Stretch Growth	Met Typical Growth	Met Neither
K	15.63	13.26	11.16	14.50	12.34	9.68	NA	NA	NA
1	17.36	17.09	15.52	16.49	15.44	13.94	15.02	13.01	10.68
2	17.47	16.96	15.78	16.81	16.36	15.40	15.57	15.03	13.45
3	15.81	15.24	13.97	15.82	15.12	14.27	15.14	14.13	12.85
4	15.16	14.51	13.52	14.96	13.99	12.79	13.58	12.98	12.02
5	14.74	14.25	13.13	14.43	13.55	12.26	13.48	12.57	11.51
6	12.58	12.42	11.52	12.49	12.20	11.04	12.02	11.66	10.36
7	10.79	10.49	9.85	10.95	10.37	9.57	10.47	9.93	8.89

Table A2: Median Hours of *i-Ready* PI in Reading in Y2 by Y1 and Y2 Growth Achieved

	Median Hours of PI in Y2								
	Y1 Met Stretch Growth			Y1 Met Typical Growth			Y1 Met Neither		
Y2 Grade	Y2 Met Stretch Growth	Y2 Met Typical Growth	Y2 Met Neither	Y2 Met Stretch Growth	Y2 Met Typical Growth	Y2 Met Neither	Y2 Met Stretch Growth	Y2 Met Typical Growth	Y2 Met Neither
1	19.23	17.87	17.05	18.05	16.98	15.91	16.83	15.88	14.69
2	17.14	16.56	15.81	16.65	15.97	15.20	16.18	15.42	14.49
3	16.23	15.34	14.40	16.19	15.37	14.27	16.07	15.07	13.97
4	15.71	14.74	13.98	15.31	14.33	13.49	14.61	13.65	12.95
5	15.14	14.44	13.48	14.73	13.77	12.91	14.26	13.52	12.60
6	12.34	11.97	11.23	12.43	12.15	11.20	12.13	11.75	10.94
7	10.10	9.97	9.39	10.39	10.30	9.48	10.10	9.92	9.05
8	7.62	8.15	7.32	8.52	9.07	8.26	8.35	8.64	7.88

Table A3: Median Hours of *i-Ready* PI in Mathematics in Y1 by Fall Placement Level and Growth Achieved

	Median Hours of PI in Y1								
	Y1 Fall: Early On Grade Level or Above			Y1 Fall: One Grade Level Below			Y1 Fall: Two or More Grade Levels Below		
Y1 Grade	Met Stretch Growth	Met Typical Growth	Met Neither	Met Stretch Growth	Met Typical Growth	Met Neither	Met Stretch Growth	Met Typical Growth	Met Neither
K	13.54	11.10	8.82	12.24	10.39	8.43	NA	NA	NA
1	15.48	14.15	12.33	14.30	13.35	11.72	13.09	11.94	10.08
2	17.40	15.76	13.43	15.81	14.35	12.49	14.17	13.06	11.42
3	17.28	15.88	14.22	16.47	15.23	13.16	14.52	13.10	11.45
4	18.46	16.59	14.83	17.11	15.68	13.60	14.93	13.38	11.58
5	18.44	16.97	14.92	17.34	15.93	13.60	15.03	13.69	11.71
6	17.24	15.89	14.00	16.02	14.67	12.51	14.29	12.79	10.95
7	15.60	13.62	12.16	14.84	13.62	11.18	12.56	11.29	9.67

Table A4: Median Hours of *i-Ready* PI in Mathematics in Y2 by Y1 and Y2 Growth Achieved

	Median Hours of PI in Y2								
	Y1 Met Stretch Growth			Y1 Met Typical Growth			Y1 Met Neither		
Y2 Grade	Y2 Met Stretch Growth	Y2 Met Typical Growth	Y2 Met Neither	Y2 Met Stretch Growth	Y2 Met Typical Growth	Y2 Met Neither	Y2 Met Stretch Growth	Y2 Met Typical Growth	Y2 Met Neither
1	17.24	16.24	14.86	16.37	15.40	13.83	15.39	14.33	13.02
2	16.81	15.69	14.02	16.32	15.11	13.61	15.35	14.50	12.97
3	17.54	16.05	14.44	16.92	15.43	13.61	16.17	14.46	12.86
4	18.80	16.80	15.00	18.13	16.08	14.14	17.14	15.22	13.49
5	18.91	17.08	14.93	17.93	16.17	14.03	16.88	15.27	13.32
6	16.71	14.92	13.09	16.28	14.69	12.89	15.57	14.05	12.26
7	14.73	13.67	11.89	14.27	13.06	11.31	13.20	12.09	10.72
8	11.69	11.08	10.14	12.09	11.43	10.14	11.47	10.85	9.55

Table A5: Y1 Median Unique Reading Lessons Completed by Met Stretch Growth, Typical Growth, or Neither

Y1 Fall Placement Level	Median Unique Reading Lessons Completed in Y1			
	Y1 Grade	Met Stretch Growth	Met Typical Growth	Met Neither
Early On Grade Level or Above	K	60	55	44
	1	53	50	45
	2	50	49	44
	3	40	34	31
	4	42	38	33
	5	40	37	32
	6	30	28	24
	7	25	22	19
One Grade Level Below	K	55	45	35
	1	58	54	48
	2	53	50	45
	3	47	43	39
	4	35	31	27
	5	34	30	25
	6	29	27	23
	7	23	21	18
Two or More Grade Levels Below	K	N/A	N/A	N/A
	1	56	45	35
	2	52	50	45
	3	47	45	39
	4	41	40	36
	5	33	31	27
	6	28	26	21
	7	23	21	18

Table A6: Y2 Median Unique Reading Lessons Completed by Met Stretch Growth, Typical Growth, or Neither

Y1 Fall Placement Level	Median Unique Reading Lessons Completed in Y2			
	Y2 Grade	Met Stretch Growth	Met Typical Growth	Met Neither
Early On Grade Level or Above	1	55	54	49
	2	47	45	40
	3	45	37	35
	4	41	36	33
	5	41	39	35
	6	34	31	27

	7	28	26	23
	8	22	21	17
One Grade Level Below	1	57	53	48
	2	47	46	42
	3	42	37	32
	4	37	32	27
	5	36	31	27
	6	31	28	24
	7	26	23	20
	8	23	22	19
Two or More Grade Levels Below	1	N/A	N/A	N/A
	2	47	45	40
	3	45	42	38
	4	38	36	31
	5	33	31	26
	6	28	25	21
	7	23	22	18
	8	21	20	17

Table A7: Y1 Median Unique Mathematics Lessons Completed by Met Stretch Growth, Typical Growth, or Neither

Y1 Fall Placement Level	Median Unique Mathematics Lessons Completed in Y1			
	Y1 Grade	Met Stretch Growth	Met Typical Growth	Met Neither
Early On Grade Level or Above	K	48	38	28
	1	54	48	40
	2	47	41	34
	3	48	42	34
	4	41	36	30
	5	36	29	24
	6	27	22	18
	7	24	20	16
One Grade Level Below	K	34	29	23
	1	48	44	37
	2	46	42	36
	3	39	34	27
	4	39	34	27
	5	32	28	22
	6	23	20	16
	7	19	16	12
	K	N/A	N/A	N/A

Two or More Grade Levels Below	1	40	33	26
	2	43	39	32
	3	37	33	28
	4	34	30	25
	5	31	27	22
	6	25	22	18
	7	19	18	15

Table A8: Y2 Median Unique Mathematics Lessons Completed by Met Stretch Growth, Typical Growth, or Neither

	Median Unique Mathematics Lessons Completed in Y2			
Y1 Fall Placement Level	Y2 Grade	Met Stretch Growth	Met Typical Growth	Met Neither
Early On Grade Level or Above	1	51	49	42
	2	46	40	34
	3	46	39	32
	4	41	35	30
	5	36	30	25
	6	27	22	18
	7	23	20	17
	8	17	14	13
One Grade Level Below	1	51	46	39
	2	45	42	36
	3	39	34	29
	4	40	34	29
	5	33	29	23
	6	25	21	17
	7	20	17	14
	8	18	15	13
Two or More Grade Levels Below	1	N/A	N/A	N/A
	2	42	40	34
	3	37	34	29
	4	36	32	26
	5	31	28	23
	6	25	23	18
	7	20	18	15
	8	17	16	13

Table A9: Percentage of Students Who Met Stretch Growth in Reading in Y1 Based on Usage of *i-Ready* PI in Y1

Grade	Average Weekly Time-on-Task	Y1 Fall Placement Level		
		Early On Grade Level or Above	One Grade Level Below	Two or More Grade Levels Below
		% Met Stretch Growth	% Met Stretch Growth	% Met Stretch Growth
K	10-29 min.	23%	37%	NA
	30-49 min.	29%	47%	NA
	50+ min.	37%	53%	NA
1	10-29 min.	47%	29%	17%
	30-49 min.	49%	31%	23%
	50+ min.	49%	34%	28%
2	10-29 min.	46%	44%	16%
	30-49 min.	49%	44%	17%
	50+ min.	50%	44%	19%
3	10-29 min.	46%	47%	21%
	30-49 min.	48%	48%	23%
	50+ min.	50%	49%	25%
4	10-29 min.	43%	43%	24%
	30-49 min.	44%	46%	25%
	50+ min.	46%	49%	27%
5	10-29 min.	36%	42%	23%
	30-49 min.	37%	45%	26%
	50+ min.	38%	46%	29%
6	10-29 min.	35%	40%	26%
	30-49 min.	34%	41%	29%
	50+ min.	34%	41%	32%
7	10-29 min.	33%	34%	24%
	30-49 min.	33%	38%	27%
	50+ min.	33%	40%	29%

Note: All students in the table have a pass rate of 70% or higher and used *i-Ready* PI for at least 18 distinct weeks or more.

Table A10: Percentage of Students Who Met Stretch Growth in Reading Y2 Based on Usage of *i-Ready* PI in Y2

Grade	Average Weekly Time-on-Task	Y2 Fall Placement Level		
		Early On Grade Level or Above	One Grade Level Below	Two or More Grade Levels Below
		% Met Stretch Growth	% Met Stretch Growth	% Met Stretch Growth
1	10-29 min.	51%	32%	20%
	30-49 min.	51%	35%	28%
	50+ min.	52%	38%	31%
2	10-29 min.	51%	43%	20%
	30-49 min.	53%	43%	22%
	50+ min.	54%	44%	25%
3	10-29 min.	46%	45%	21%
	30-49 min.	49%	46%	23%
	50+ min.	50%	48%	25%
4	10-29 min.	43%	41%	23%
	30-49 min.	45%	45%	24%
	50+ min.	46%	47%	26%
5	10-29 min.	35%	42%	23%
	30-49 min.	36%	44%	26%
	50+ min.	36%	45%	28%
6	10-29 min.	32%	38%	27%
	30-49 min.	32%	38%	28%
	50+ min.	33%	39%	30%
7	10-29 min.	30%	35%	24%
	30-49 min.	29%	35%	26%
	50+ min.	28%	33%	27%
8	10-29 min.	27%	32%	24%
	30-49 min.	25%	32%	25%
	50+ min.	24%	31%	27%

Note: All students in the table have a pass rate of 70% or higher and used *i-Ready* PI for at least 18 distinct weeks or more.

Table All: Percentage of Students Who Met Stretch Growth in Mathematics in Y1 Based on Usage of *i-Ready* PI in Y1

Grade	Average Weekly Time-on-Task	Y1 Fall Placement Level		
		Early On Grade Level or Above	One Grade Level Below	Two or More Grade Levels Below
		% Met Stretch Growth	% Met Stretch Growth	% Met Stretch Growth
K	10-29 min.	22%	44%	NA
	30-49 min.	29%	51%	NA
	50+ min.	34%	55%	NA
1	10-29 min.	14%	33%	29%
	30-49 min.	16%	35%	31%
	50+ min.	20%	39%	34%
2	10-29 min.	11%	26%	22%
	30-49 min.	12%	29%	24%
	50+ min.	20%	33%	26%
3	10-29 min.	31%	27%	20%
	30-49 min.	33%	29%	24%
	50+ min.	39%	34%	28%
4	10-29 min.	35%	26%	17%
	30-49 min.	39%	28%	19%
	50+ min.	45%	33%	22%
5	10-29 min.	36%	27%	16%
	30-49 min.	38%	30%	18%
	50+ min.	44%	34%	22%
6	10-29 min.	43%	30%	19%
	30-49 min.	46%	35%	23%
	50+ min.	47%	39%	27%
7	10-29 min.	39%	33%	18%
	30-49 min.	42%	34%	23%
	50+ min.	47%	37%	29%

Note: All students in the table have a pass rate of 70% or higher and used *i-Ready* PI for at least 18 distinct weeks or more.

Table A12: Percentage of Students Who Met Stretch Growth in Mathematics in Y2 Based on Usage of *i-Ready* PI in Y2

Grade	Average Weekly Time-on-Task	Y2 Fall Placement Level		
		Early On Grade Level or Above	One Grade Level Below	Two or More Grade Levels Below
		% Met Stretch Growth	% Met Stretch Growth	% Met Stretch Growth
1	10-29 min.	20%	34%	31%
	30-49 min.	23%	38%	34%
	50+ min.	26%	41%	37%
2	10-29 min.	12%	25%	22%
	30-49 min.	14%	28%	23%
	50+ min.	23%	32%	25%
3	10-29 min.	32%	26%	18%
	30-49 min.	36%	29%	19%
	50+ min.	43%	34%	23%
4	10-29 min.	33%	22%	14%
	30-49 min.	38%	25%	15%
	50+ min.	45%	28%	19%
5	10-29 min.	32%	23%	14%
	30-49 min.	34%	25%	16%
	50+ min.	40%	29%	19%
6	10-29 min.	43%	25%	18%
	30-49 min.	42%	29%	20%
	50+ min.	45%	33%	25%
7	10-29 min.	42%	28%	18%
	30-49 min.	42%	30%	21%
	50+ min.	43%	32%	27%
8	10-29 min.	35%	35%	21%
	30-49 min.	36%	35%	25%
	50+ min.	38%	36%	29%

Note: All students in the table have a pass rate of 70% or higher and used *i-Ready* PI for at least 18 distinct weeks or more.

Table A13: Change in Placement Level in Reading and *i-Ready* PI Total Time-on-Task for All Grade Cohorts in Y1 to Y2 with Y1 Fall Placement of Two or More Grade Levels Below

Y1→ Y2 Grade	Y1 Fall Placement Level	Y2 Spring Placement Level	Y1 Median Total Time-on-Task (Hrs.)	Y2 Median Total Time-on-Task (Hrs.)
1 → 2	Two or More Grade Levels Below	Early On Grade Level or Above	13.87	16.68
		One Grade Level Below	12.58	14.85
		Two or More Grade Levels Below	11.15	13.25
2 → 3	Two or More Grade Levels Below	Early On Grade Level or Above	15.37	15.62
		One Grade Level Below	14.82	14.94
		Two or More Grade Levels Below	13.43	13.74
3 → 4	Two or More Grade Levels Below	Early On Grade Level or Above	14.99	15.55
		One Grade Level Below	14.09	13.67
		Two or More Grade Levels Below	13.08	12.59
4 → 5	Two or More Grade Levels Below	Early On Grade Level or Above	13.99	15.57
		One Grade Level Below	13.26	13.83
		Two or More Grade Levels Below	12.45	12.14
5 → 6	Two or More Grade Levels Below	Early On Grade Level or Above	13.19	13.24
		One Grade Level Below	12.74	12.43
		Two or More Grade Levels Below	12.05	11.04
6 → 7	Two or More Grade Levels Below	Early On Grade Level or Above	12.22	11.48
		One Grade Level Below	11.66	10.62
		Two or More Grade Levels Below	10.89	9.46
7 → 8	Two or More Grade Levels Below	Early On Grade Level or Above	10.62	10.15

	One Grade Level Below	9.97	9.88
	Two or More Grade Levels Below	9.28	8.91

Table A14: Change in Placement Level in Reading and *i-Ready* PI Distinct Weeks for All Grade Cohorts in Y1 to Y2 with Y1 Fall Placement of Two or More Grade Levels Below

Y1→ Y2 Grade	Y1 Fall Placement Level	Y2 Spring Placement Level	Y1 Median Distinct Weeks	Y2 Median Distinct Weeks
1 → 2	Two or More Grade Levels Below	Early On Grade Level or Above	24	26
		One Grade Level Below	23	25
		Two or More Grade Levels Below	21	24
2 → 3	Two or More Grade Levels Below	Early On Grade Level or Above	25	25
		One Grade Level Below	25	25
		Two or More Grade Levels Below	23	24
3 → 4	Two or More Grade Levels Below	Early On Grade Level or Above	24	24
		One Grade Level Below	23	23
		Two or More Grade Levels Below	22	22
4 → 5	Two or More Grade Levels Below	Early On Grade Level or Above	23	24
		One Grade Level Below	22	23
		Two or More Grade Levels Below	22	21
5 → 6	Two or More Grade Levels Below	Early On Grade Level or Above	22	22
		One Grade Level Below	21	21
		Two or More Grade Levels Below	21	20
6 → 7	Two or More Grade Levels Below	Early On Grade Level or Above	20	20

		One Grade Level Below	20	19
		Two or More Grade Levels Below	19	18
7 → 8	Two or More Grade Levels Below	Early On Grade Level or Above	18	18
		One Grade Level Below	18	18
		Two or More Grade Levels Below	17	17

Table A15: Change in Placement Level in Reading and *i-Ready* PI Unique Lessons for All Grade Cohorts in Y1 to Y2 with Y1 Fall Placement of Two or More Grade Levels Below

Y1 → Y2 Grade	Y1 Fall Placement Level	Y2 Spring Placement Level	Y1 Median Unique Lessons Completed	Y2 Median Unique Lessons Completed
1 → 2	Two or More Grade Levels Below	Early On Grade Level or Above	53	45
		One Grade Level Below	44	44
		Two or More Grade Levels Below	36	40
2 → 3	Two or More Grade Levels Below	Early On Grade Level or Above	52	42
		One Grade Level Below	50	42
		Two or More Grade Levels Below	45	39
3 → 4	Two or More Grade Levels Below	Early On Grade Level or Above	48	36
		One Grade Level Below	44	33
		Two or More Grade Levels Below	40	34
4 → 5	Two or More Grade Levels Below	Early On Grade Level or Above	43	34
		One Grade Level Below	41	29
		Two or More Grade Levels Below	37	29
5 → 6	Two or More Grade Levels Below	Early On Grade Level or Above	30	30

		One Grade Level Below	28	26
		Two or More Grade Levels Below	30	22
6 → 7	Two or More Grade Levels Below	Early On Grade Level or Above	26	25
		One Grade Level Below	24	22
		Two or More Grade Levels Below	24	19
7 → 8	Two or More Grade Levels Below	Early On Grade Level or Above	22	23
		One Grade Level Below	20	21
		Two or More Grade Levels Below	19	17

Table A16: Change in Placement Level in Mathematics and *i-Ready* PI Total Time-on-Task for All Grade Cohorts in Y1 to Y2 with Y1 Fall Placement of Two or More Grade Levels Below

Y1 → Y2 Grade	Y1 Fall Placement Level	Y2 Spring Placement Level	Y1 Median Total Time-on-Task (Hrs.)	Y2 Median Total Time-on-Task (Hrs.)
1 → 2	Two or More Grade Levels Below	Early On Grade Level or Above	13.25	15.81
		One Grade Level Below	11.67	14.05
		Two or More Grade Levels Below	10.30	12.30
2 → 3	Two or More Grade Levels Below	Early On Grade Level or Above	13.97	16.10
		One Grade Level Below	12.77	13.85
		Two or More Grade Levels Below	11.45	12.35
3 → 4	Two or More Grade Levels Below	Early On Grade Level or Above	14.52	17.51
		One Grade Level Below	12.77	14.38

		Two or More Grade Levels Below	11.76	12.54
4 → 5	Two or More Grade Levels Below	Early On Grade Level or Above	14.69	17.38
		One Grade Level Below	13.40	14.83
		Two or More Grade Levels Below	11.82	12.25
5 → 6	Two or More Grade Levels Below	Early On Grade Level or Above	14.96	16.24
		One Grade Level Below	13.86	14.25
		Two or More Grade Levels Below	12.17	11.78
6 → 7	Two or More Grade Levels Below	Early On Grade Level or Above	14.52	14.65
		One Grade Level Below	13.32	12.85
		Two or More Grade Levels Below	11.58	10.32
7 → 8	Two or More Grade Levels Below	Early On Grade Level or Above	12.52	13.15
		One Grade Level Below	11.86	12.29
		Two or More Grade Levels Below	10.24	9.77

Table A17: Change in Placement Level in Mathematics and *i-Ready* PI Distinct Weeks for All Grade Cohorts in Y1 to Y2 with Y1 Fall Placement of Two or More Grade Levels Below

Y1→ Y2 Grade	Y1 Fall Placement Level	Y2 Spring Placement Level	Y1 Median Distinct Weeks	Y2 Median Distinct Weeks
1 → 2	Two or More Grade Levels Below	Early On Grade Level or Above	25	27
		One Grade Level Below	23	25
		Two or More Grade Levels Below	21	24
2 → 3	Two or More Grade Levels Below	Early On Grade Level or Above	25	26
		One Grade Level Below	24	24
		Two or More Grade Levels Below	22	23
3 → 4	Two or More Grade Levels Below	Early On Grade Level or Above	24	26
		One Grade Level Below	23	24
		Two or More Grade Levels Below	22	22
4 → 5	Two or More Grade Levels Below	Early On Grade Level or Above	24	25
		One Grade Level Below	23	23
		Two or More Grade Levels Below	21	22
5 → 6	Two or More Grade Levels Below	Early On Grade Level or Above	23	23
		One Grade Level Below	22	22
		Two or More Grade Levels Below	21	20
6 → 7	Two or More Grade Levels Below	Early On Grade Level or Above	21	21
		One Grade Level Below	21	20
		Two or More Grade Levels Below	19	18
7 → 8	Two or More Grade Levels Below	Early On Grade Level or Above	19	19
		One Grade Level Below	19	19
		Two or More Grade Levels Below	17	17

Table A18: Change in Placement Level in Mathematics and *i-Ready* PI Unique Lessons for All Grade Cohorts in Y1 to Y2 with Y1 Fall Placement of Two or More Grade Levels Below

Y1→ Y2 Grade	Y1 Fall Placement Level	Y2 Spring Placement Level	Y1 Median Unique Lessons Completed	Y2 Median Unique Lessons Completed
1 → 2	Two or More Grade Levels Below	Early On Grade Level or Above	43	44
		One Grade Level Below	33	39
		Two or More Grade Levels Below	25	30
2 → 3	Two or More Grade Levels Below	Early On Grade Level or Above	44	36
		One Grade Level Below	38	31
		Two or More Grade Levels Below	31	30
3 → 4	Two or More Grade Levels Below	Early On Grade Level or Above	36	36
		One Grade Level Below	32	28
		Two or More Grade Levels Below	30	27
4 → 5	Two or More Grade Levels Below	Early On Grade Level or Above	32	31
		One Grade Level Below	28	26
		Two or More Grade Levels Below	27	24
5 → 6	Two or More Grade Levels Below	Early On Grade Level or Above	29	23
		One Grade Level Below	26	21
		Two or More Grade Levels Below	24	20
6 → 7	Two or More Grade Levels Below	Early On Grade Level or Above	23	18
		One Grade Level Below	21	16
		Two or More Grade Levels Below	20	16
7 → 8	Two or More Grade Levels Below	Early On Grade Level or Above	17	16

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		One Grade Level Below	17	15
		Two or More Grade Levels Below	16	15