Curriculum Associates RESEARCH

Achievement and Growth for *i-Ready Classroom Mathematics* in Multiple States for Grades 3–5 in Mathematics

Mathematics

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Research Report | April 2025

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Summary

i-Ready Classroom Mathematics (iRCL) is a comprehensive Grades K-8 mathematics program that is designed to help teachers foster a strong mathematics learning culture as well as enhance student mathematics engagement, confidence, and achievement. In this study, we focus on comparing students in Grades 3-5 with access to the curriculum to those without. We leverage a sample of students representing multiple states to evaluate the differences in achievement and growth scores on the *i-Ready Diagnostic* for Mathematics. Findings show that iRCL students outperformed non-iRCL students in Diagnostic for Mathematics scores while also showing higher growth. Positive results were maintained among students who identify as Hispanic, Black, those classified as economically disadvantaged, English Learners, and as having a disability. Findings support a student-centered approach to mathematics as represented by iRCL.

i-Ready

Introduction

A solid foundation in mathematics is becoming increasingly crucial in today's technology-driven world. According to the US Bureau of Labor Statistics, math-related careers are projected to grow faster than the average occupation, with roles such as data scientists and actuaries expected to increase by more than 20% by 2033 (Bureau of Labor Statistics, 2024). Developing strong mathematics skills in elementary and middle school are essential for preparing students to excel in subjects like Algebra. Algebra success has been shown to predict a wide range of positive outcomes, including high school and college graduation and improved job prospects (National Mathematics Advisory Panel, 2008; Spielhagen, 2006).

Despite the growing importance of mathematics skills, many students continue to struggle. According to the 2024 National Assessment of Educational Progress (NAEP), only 39% of fourth graders achieved proficiency in mathematics, while 24% fell below the basic level (National Center for Education Statistics, 2025). Furthermore, students continue to recover from substantial learning losses due to school closures, with the most academically vulnerable students experiencing the greatest setbacks (Curriculum Associates, 2024).

One solution to meet the increasing demand for stronger mathematics education is the implementation of effective mathematics curriculum. When paired with effective instruction, a well-designed curriculum can greatly enhance student performance in mathematics (Bhatt et al., 2013; Cohen et al., 2003; Koedel et al., 2017). High-quality mathematics curriculum plays a critical role in student learning and development, serving not only as a key resource for teachers but also as a means of engaging students (Lyakhova et al., 2019). Beyond teaching mathematics concepts, a robust curriculum fosters problem-solving skills and helps students recognize the real-world relevance of mathematics (Jeannotte & Kieran, 2017). Given its crucial role in shaping student achievement, it is essential to understand the relationship between curriculum design and academic success in mathematics.

This study provides insight into the relationship between mathematics curriculum and achievement, focusing on Curriculum Associates' *i-Ready Classroom Mathematics* (iRCL). Grounded in the Effective Mathematics Teaching Practices from the National Council of Teachers of Mathematics, it supports teachers in identifying student needs and accelerating progress toward grade-level proficiency (NCTM, 2014). iRCL is a student-centered, core mathematics program that aims to deepen understanding, promote mastery, and connect mathematics to real-world contexts.

Methodology

Research Questions

This study was designed to address the following research question:

1. What is the difference in achievement and growth between students in schools that report using iRCL compared to similar students who do not use iRCL on the *i-Ready Diagnostic* for Mathematics?

Data

This study used a combination of district-provided student data and information from Curriculum Associates' databases. Districts supplied data on students' racial demographics, English Learner status, disability status, and economically disadvantaged status.

Curriculum Associates' databases provided access to district and school purchase data for iRCL, along with students' fall and spring *i-Ready Diagnostic* for Mathematics achievement and growth scores.

iRCL is a comprehensive Grades K–8 mathematics program that combines print and digital resources to help teachers support a strong mathematics learning culture and claims to boost student engagement, confidence, and achievement. The curriculum offers a range of tools, including Teacher's Guides, adaptive Diagnostic assessments, professional learning support, instructional activities, student worksheets, practice books, and hands-on manipulatives.

In this study, students were considered iRCL users if their school or district purchased iRCL for two consecutive years. These academic years ranged from 2020-2023 academic years. One state consisted of data for the 2020-2022 academic years, while three states' data are from the 2021-2023 academic years. Only student data from the most recent school year was used (for example, 2021-2022 data for schools and districts in the 2020-2022 and 2022-2023 data for schools and districts in 2021-2023 sample). Using only the most recent year allowed us to adjust for implementation effects, such as the teacher learning involved in adopting a new curriculum. Except for one state, iRCL usage was also confirmed by Curriculum Associates' Implementation Support teams at each site.

The *i-Ready Diagnostic* by Curriculum Associates, developed independently of the iRCL curriculum, is an adaptive online assessment that measures students' placement relative to grade-level standards and national norms in Reading or Mathematics, with scale scores ranging from 100 to 800. All students completed the fall Diagnostic within Curriculum Associates' standard testing window between August 1 and November 15, 2022 (or between August 1 and November 15, 2021, for one state). The strong linking, or correlation, between Diagnostic scores and state mathematics scores for Grades 3–5 (.79 to .89 depending on the state and grade) made students' fall Diagnostic score a logical pre-achievement measure for this study (Curriculum Associates, 2023b).

The Diagnostic also classifies students into criterion-referenced placement levels based on a scale score for both overall mathematics achievement and domain achievement (Curriculum Associates, 2023a). For the purposes of our analyses, students were placed into categories based upon these placements. See Table 1 for a crosswalk between the Diagnostic's criterion-referenced placement levels and the categories used in this analysis.

Table 1. Crosswalk of Analysis Categories and Diagnostic Grade-Level Placements

Analysis Category	Grade-Level Placement
Mid or Above Grade Level	Mid Grade Level Late Grade Level Above Grade Level
Early On Grade Level	Early On Grade Level
One Grade Level Below	One Grade Level Below
Two Grade Levels Below	Two Grade Levels Below
Three or More Grade Levels Below	Three or More Grade Levels Below

This study also incorporated Typical Growth and Stretch Growth® targets from the Diagnostic. Typical Growth represents the average student growth for each grade, while Stretch Growth targets aim to help below-grade level students reach proficiency and on-grade level students achieve advanced proficiency (Rome & Daisher, 2023). Since our primary interest lies in the extent to which iRCL influences student growth—rather than the likelihood of any impact—this study measured the percentage of students meeting both their Typical Growth and Stretch Growth targets as outcomes.

Sample

Students in Grades 3–5 across four states during the study's academic years were eligible. Students were divided into two groups based on an intent-to-treat quasi-experimental design. Quasi-experimental designs analyze all students exposed to an intervention as if they received it, regardless of actual participation (Shadish et al., 2002). Those attending schools that used iRCL during the years included in the study were assigned to the iRCL treatment group, whereas those in non-iRCL schools formed the comparison group. Out of 279,085 students overall, 28, 429, or approximately one-tenth, were assigned to the iRCL treatment group.

While students in the treatment group were selected based on their school's adoption of iRCL, not all may have used the curriculum. As we lack individual-level iRCL data, such as iRCL-specific quizzes or worksheets, we cannot confirm usage; thus, some students may be in classrooms that employ a different curriculum despite the school's overall adoption of iRCL. Furthermore, the implementation quality may vary by classroom due to influence by teachers' familiarity and adherence to the curriculum. Therefore, students were assigned to the iRCL or non-iRCL groups based on their opportunity to engage with the curriculum rather than actual usage.

Table 2 displays an overview of the sample descriptive for each group. When compared to the non-iRCL comparison group overall, the iRCL treatment group included fewer economically disadvantaged, female, English Learner, American Indian or Alaska Native, Asian, Hispanic, Black, and Hawaiian or Pacific Islander students. The iRCL treatment group consisted of more White students, students of two or more races, and students with disabilities. Additionally, the iRCL group performed slightly lower on the fall Diagnostic than the non-iRCL group.

Given these characteristics are linked to spring achievement, to strengthen claims that any achievement difference between the iRCL and non-iRCL groups are related to iRCL usage, propensity score matching was employed to reduce sample differences in these key covariates.

Table 2. Sample Descriptive Data before Matching for Grades 3–5

	Grades 3-5	
	iRCL	**Non-iRCL**
School Count	97	804
Student Count	28,429	250,656
Mean Fall Diagnostic Score	452.96	457.09
Percentage Female	48.4	48.77
Percentage Economically Disadvantaged	50.24	54.96
Percentage Disability	16.88	14.32
Percentage English Learners	13.34	17.61
Percentage American Indian or Alaska Native	.19	.26
Percentage Asian	4.73	9.53
Percentage Hispanic	29.98	50.29
Percentage Black	8.29	9.89
Percentage White	49.32	24.7
Percentage Hawaiian or Pacific Islander	.2	.28
Percentage Two or More Races	7.29	5.05

Propensity Score Matching

Propensity score matching reduces selection bias in observational studies by matching participants with similar probabilities (i.e., propensities) of receiving a treatment based on observed covariates. This process creates comparable treatment and control groups, minimizing the confounding influence of covariates on the estimated treatment effect (Austin, 2011; Caliendo & Kopeinig, 2008).

All matching was completed using the MatchIt version 4.5.5 package (Ho et al., 2011) in R version 4.2.3 (R Core Team, 2023). A systematic series of matching analyses, using various student and school characteristics (see Table 3 for criteria), was conducted to create three matched datasets—one for each grade from third to fifth—and one additional dataset by pooling Grades 3–5. Among these criteria, the student-level fall Diagnostic for Mathematics was included in each matched analysis.

Table 3. Matching Criteria Considered

Student Characteristics	School Characteristics
Fall Diagnostic for Mathematics Scores*	School Mean Fall Diagnostic for Mathematics Score
Economically Disadvantaged	Percentage White Students
English Learner Status	Percentage Black Students
Student Race/Ethnicity	Percentage Hispanic Students
	Percentage Female Students
	Percentage Free and Reduced-Lunch Students

*Students' fall Diagnostic for Mathematics scores were included in each matched analysis.

In our systematic approach, we began by matching students using all potential criteria, excluding those with missing data for any of these characteristics. Starting with all potential criteria allows the generation of high propensity score matches across all categories. Matching was completed multiple times with varying matching criteria, and the criteria that produced the best match quality was used for analysis. After creating matched samples, we ran descriptive statistics to determine which criteria produced the best match.

We only considered samples with at least 350 students in both treatment and control groups and a standardized mean difference of <|.25| for the fall Diagnostic for Mathematics score, a common benchmark for assessing group balance in educational quasi-experimental designs (Evidence for ESSA Standards and Procedures, n.d.; What Works Clearinghouse, 2022). After narrowing down the matched samples, we prioritized those with the most criteria having standardized differences <|.25|. If multiple samples met the same number of criteria, we selected the one with the largest sample size. Any sample with a standardized difference greater than 1 on any criterion was excluded.

Non-iRCL samples were randomly ordered to optimize the model's ability to identify the best match. This approach showed slight sensitivity to the dataset order. While reordering the data produced some variation in sample composition and results, testing across different orderings showed only minimal differences. We opted to adhere to random ordering, which produced consistent and replicable results across all models. Repeating this process demonstrated that even when more than 25% of the comparison sample differed while adhering to the same matching criteria, the results and sample size remained consistent.

Tables 4 and 5 present the differences between the iRCL and non-iRCL groups on key covariates after matching. The matching criteria included race/ethnicity and fall diagnostic mathematics score. After matching, all standardized differences were well below .25 for all samples (see Tables 4 and 5).

Table 4. Sample Descriptive Data after Matching for Grades 3–5

	Grade 3			Grade 4			Grade 5		
	iRCL	Non-iRCL	Standard Difference	iRCL	Non-iRCL	Standard Difference	iRCL	Non-iRCL	Standard Difference
Student Count	5,387	5,387		5,281	5281		5,374	5,374	
School Count	85	538		85	544		72	521	
Mean Fall Diagnostic	421.58	419.9	.0612	443.79	442.54	.043	463.31	460.75	.0848
Percentage Female	48.61	50.08	.0293	47.75	48.84	.0218	48.56	48.9	.0068
Percentage Economically Disadvantaged	50.66	53.79	.0627	50	52.73	.0547	49.06	50.9	.0369
Percentage Disability Status	16.86	15.58	.0348	16.81	14	.0779	16.68	13.02	.1032
Percentage English Learners	15.04	10.2	.1461	14.32	9.88	.1366	12.32	9.06	.1058
Percentage Black	8.64	8.7	.002	9.51	8.7	.0282	9.09	8.39	.0249
Percentage White	51.98	51.32	.0131	50.2	50.64	.0087	52.66	52.27	.0079
Percentage Hispanic	27.34	28	.0146	26.84	28.17	.0297	26.24	27.37	.0254
Percentage Asian	4.44	4.53	.0046	4.39	4.66	.0133	4.1	4.15	.0025
Percentage American Indian or Alaska Native	.13	.1	.0113	.21	.06	.0418	.13	.12	.0052
Percentage Hawaiian or Pacific Islander	.13	.1	.0113	.1	.04	.0221	.27	.1	.0402
Percentage Two or More Races	7.33	7.26	.003	8.75	7.74	.0369	7.5	7.62	.0043

Note: Matching criteria included the student's race/ethnicity, fall Diagnostic for Mathematics score, and whether the student was classified as economically disadvantaged.

Table 5. Sample Descriptive Data after Matching for Pooled Grades 3-5

	Grades 3-5		
	iRCL	Non-iRCL	Standard Difference
Student Count	16,068	16,068	
School Count	94	627	
Mean Fall Diagnostic	443.08	440.74	.0699
Percentage Female	48.35	49.26	.0181
Percentage Economically Disadvantaged	49.86	52.59	.0547

Percentage Disability Status	16.63	14.26	.0656
Percentage English Learners	13.82	9.62	.1307
Percentage Black	9.02	8.58	.0154
Percentage White	51.94	51.39	.0108
Percentage Hispanic	26.83	27.65	.0184
Percentage Asian	4.25	4.48	.0115
Percentage American Indian or Alaska Native	.12	.07	.0164
Percentage Hawaiian or Pacific Islander	.14	.07	.0216
Percentage Two or More Races	7.7	7.75	.0017

Post-Attrition Sample Evaluation

After matching, we conducted an attrition evaluation to understand how many students who had a valid fall *i-Ready Diagnostic* score and relevant demographic data but did not have a valid *i-Ready Diagnostic* mathematics score. See Table 6 for attrition rates of the iRCL and non-iRCL groups by each matched grade sample. For every grade, differential attrition across iRCL and non-iRCL groups was less than 4%, which is considered an acceptable rate of attrition in education research (Evidence for ESSA Standards and Procedures, n.d.). See Tables 7 and 8 for descriptive information of the final sample after students without spring *i-Ready Diagnostic* scale scores were removed. This is representative of the sample as analyzed, not necessarily of individual students.

Table 6. Sample Attrition by Each Matched Grade Sample

	iRCL			Non-iRCL		
Grades	Sample Size	Attrition Count	Percent Attrition	Sample Size	Attrition Count	Percent Attrition
3-5	16,068	310	1.93	16,068	634	3.95
3	5,387	90	1.67	5,387	161	2.99
4	5,281	96	1.82	5,281	183	3.47
5	5,374	122	2.27	5,374	288	5.36

Table 7. Final Sample Descriptives for iRCL and Non-iRCL after Matching for Grades 3-5

	Grade 3			Grade 4			Grade 5		
	iRCL	Non-iRCL	Standard Difference	iRCL	Non-iRCL	Standard Difference	iRCL	Non-iRCL	Standard Difference
Student Count	5,297	5,226		5,185	5,098		5,252	5,086	
School Count	85	523		85	532		72	508	
Mean Fall Diagnostic	421.74	420.1	.06	443.99	442.58	.05	463.58	460.51	.10
Percentage Female	48.53	50.26	.03	47.77	49.11	.03	48.43	49.11	.01

Percentage Economically Disadvantaged	50.57	53.45	.06	50.07	52.88	.06	49.07	51.76	.05
Percentage Disability Status	16.79	15.56	.03	16.75	13.91	.08	16.51	12.8	.11
Percentage English Learners	14.94	9.69	.16	14.23	9.66	.14	12.16	9.07	.10
Percentage Black	8.59	8.75	.01	9.51	8.81	.02	9.15	8.65	.02
Percentage White	52.17	51.96	0	50.36	50.81	.01	52.94	51.69	.02
Percentage Hispanic	27.21	27.45	.01	26.63	27.92	.03	25.96	27.44	.03
Percentage Asian	4.38	4.51	.01	4.35	4.55	.01	4.09	4.22	.01
Percentage American Indian or Alaska Native	.14	.10	.01	.22	.06	.04	.14	.10	.01
Percentage Hawaiian or Pacific Islander	.14	.06	.02	.10	.04	.02	.27	.08	.05
Percentage Two or More Races	7.38	7.17	.01	8.84	7.8	.04	7.45	7.81	.01

Table 8. Final Sample Descriptives for iRCL and Non-iRCL after Matching for Pooled Grades 3-5

	Grades 3-5		
	iRCL	**Non-iRCL**	**Standard Difference**
Student Count	15,758	15,434	
School Count	94	619	
Mean Fall Diagnostic	443.26	440.6	.08
Percentage Female	48.29	49.52	.02
Percentage Economically Disadvantaged	49.85	52.81	.06
Percentage Disability Status	16.53	14.17	.07
Percentage English Learners	13.69	9.35	.14
Percentage Black	9.01	8.73	.01
Percentage White	52.16	51.5	.01
Percentage Hispanic	26.62	27.35	.02
Percentage Asian	4.22	4.46	.01
Percentage American Indian or Alaska Native	.12	.07	.02
Percentage Hawaiian or Pacific Islander	.14	.05	.03
Percentage Two or More Races	7.73	7.83	0

Analyses

To assess differences between iRCL and non-iRCL users, we conducted various two-level, students-within-schools hierarchical linear models (HLM).

Level 1 (Student):

$$Y_{ij} = \beta_{0j} + \beta_{1j}(iRCL_{ij}) + \beta_{2j}(Academic\ year_{ij}) + \beta_{3j}(Base\ Score_{ij} - \overline{Base\ Score}) + \beta_{4j}(American\ Indian\ or\ Alaskan\ Native_{ij}) + \beta_{5j}(Asian_{ij}) + \beta_{6j}(Black_{ij}) + \beta_{7j}(Hawaiian\ or\ Pacific\ Islander_{ij}) + \beta_{8j}(Two\ or\ More\ Races_{ij}) + \beta_{9j}(Economically\ Disadvantaged_{ij}) + \beta_{10j}(Disability_{ij}) + \beta_{11j}(English\ Languager\ Learner_{ij}) + e_{ij}$$

Level 2 (School):

$$\beta_{0j} = y_{00} + u_{0j}$$

$$\beta_{1j} = y_{10}$$

$$\beta_{2j} = y_{20}$$

$$\beta_{3j} = y_{30}$$

$$\beta_{4j} = y_{40}$$

$$\beta_{5j} = y_{50}$$

$$\beta_{6j} = y_{60}$$

$$\beta_{7j} = y_{70}$$

$$\beta_{8j} = y_{80}$$

$$\beta_{9j} = y_{90}$$

$$\beta_{10j} = y_{100}$$

$$\beta_{11j} = y_{110}$$

In this equation, Y_{ij} represents the predicted mathematics outcomes for this analysis. We used spring Diagnostic for Mathematics scores, and the proportion of students meeting Stretch Growth and Typical Growth targets for mathematics as the outcomes.

At the student level, β_{0j} is the adjusted average fall outcome score for iRCL students in school *j*, β_{1j} is the vector representing the adjusted treatment effect of iRCL, β_{2j} represents the adjusted mean difference in the outcome score between those students in the 2021-2022 academic year compared to students in the 2022-2023 academic year, and β_{3j} is the adjusted mean difference in the outcome for every unit change in the students prior fall *i-Ready Diagnostic* score. At the school level, y_{00} is the predicted average outcome score across schools for iRCL

students, and u_{0j} is the deviation between a school's average outcome score and the overall average outcome score across schools for iRCL students.

For definitions and the reference group of each variable, see Table 9. As demographic covariates were not grand-mean centered, they retain interpretations in relation to the reference group.

Table 9. Impact Model Variable Definitions and Reference Groups

Variable	Definition	Reference
iRCL	iRCL or Non-iRCL group membership	Non-iRCL
Academic Year	Indicator for whether a student was from the 2021-2022 or 2022-2023 academic year	2021-2022 Year
Base Score	Fall *i-Ready Diagnostic* scale score	Continuous Variable
American Indian or Alaska Native	Indicator representing American Indian or Alaska Native students and White students	White Student
Asian	Indicator representing Asian students and White students	White Student
Black	Indicator representing Black students and White students	White Student
Hawaiian or Pacific Islander	Indicator representing Hawaiian or Pacific Islander students and White students	White Student
Two or More Races	Indicator representing students with two or more races and White students	White Student
Economically Disadvantaged	Economically Disadvantaged status	Not Economically Disadvantaged
Disability	Disability status	Student without Disability
English Learners	English Learner status	Not an English Learner

Alongside the impact model, we conducted subgroup analyses using simpler models for certain subgroups (i.e., Hispanic, Asian, White, Black, Economically Disadvantaged, English Learners, students with a disability). These models are like the impact model, but exclude demographic covariates and include only iRCL, academic year, and base score as predictors.

For all outcomes, in addition to unstandardized regressions, we also ran standardized regressions, where outcome variables and fall *i-Ready Diagnostic* scores were standardized beforehand to provide standardized effect sizes.

Alongside the HLM analyses, we also conducted descriptive analyses comparing fall and spring grade-level placement percentages. For these tables, placements were grouped into five categories: Three or More Grade Levels Below, Two Grade Levels Below, One Grade Level Below, Early On Grade Level, and Mid or Above Grade Level. These different categorizations are based on instructional "views" available in the platform for educators.

Results

Grades 3-5 Overall Results

When looking at the Grades 3-5 sample overall (see Table 10), there was a statistically significant positive effect of using iRCL. On average, students who used iRCL performed 3.50 points higher on the spring Diagnostic compared to students using other mathematics curricula. Students using iRCL showed different growth patterns, with higher proportions meeting Typical Growth and Stretch Growth targets, with percentage-point differences of eight and seven, respectively. Magnitude of the standardized effect sizes represent moderate and educationally meaningful differences (Kraft, 2020).

Table 10. HLM Regressions of the Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Pooled Grades 3–5

	Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Variable	***B*(SE)**	**β(SE)**	**B(SE)**	**β(SE)**	**B(SE)**	**β(SE)**
(Intercept)	467.93 (0.44)**	0.03 (0.01)*	0.60 (0.01)**	0.03 (0.02)	0.29 (0.01)**	0.06 (0.02)**
Use iRCL	3.50 (0.7)**	0.10 (0.02)**	0.08 (0.02)**	0.17 (0.03)**	0.07 (0.01)**	0.16 (0.03)**
Academic Year	-1.29 (0.58)**	-0.04 (0.02)	-0.03 (0.01)*	-0.06 (0.03)*	-0.03 (0.01)**	-0.06 (0.03)**
American Indian or Alaska Native	-3.76 (3.17)	-0.11 (0.09)**	-0.12 (0.1)	-0.25 (0.2)	-0.07 (0.09)	-0.16 (0.19)
Asian	1.75 (0.53)**	0.05 (0.01)**	0.04 (0.02)**	0.08 (0.03)**	0.05 (0.01)**	0.11 (0.03)**
Black	-3.14 (0.43)**	-0.09 (0.01)	-0.05 (0.01)**	-0.1 (0.03)**	-0.06 (0.01)**	-0.15 (0.03)**
Hawaiian or Pacific Islander	4.43 (3.31)	0.12 (0.09)**	0.23 (0.1)**	0.47 (0.2)**	0.09 (0.09)	0.21 (0.20)
Hispanic	-1.21 (0.32)**	-0.03 (0.01)	-0.01 (0.01)	-0.02 (0.02)	-0.03 (0.01)**	-0.06 (0.02)**
Two or More Races	-0.36 (0.41)	-0.01 (0.01)**	-0.01 (0.01)	-0.02 (0.02)	0.00 (0.01)	-0.01 (0.02)
Economically Disadvantaged	-2.09 (0.26)**	-0.06 (0.01)**	-0.05 (0.01)**	-0.10 (0.02)**	-0.04 (0.01)**	-0.10 (0.02)**
Disability Status	-5.36 (0.31)**	-0.15 (0.01)**	-0.09 (0.01)**	-0.18 (0.02)**	-0.06 (0.01)**	-0.13 (0.02)**
English Learner Status	-1.65 (0.37)**	-0.05 (0.01)**	-0.02 (0.01)*	-0.04 (0.02)*	-0.03 (0.01)**	-0.07 (0.02)**
Base Score	0.90 (0.00)**	0.84 (0.00)**	0.00 (0.00)	0.00 (0.01)	0.00 (0.00)**	0.10 (0.01)**
Conditional R^2	0.80		0.06		0.07	

Marginal R^2	0.78	0.02	0.04
Adjusted ICC	0.08	0.04	0.03
Unadjusted ICC	0.02	0.04	0.03

Note: **p < .05, *p <.1; N = 24,241

iRCL users at each grade level also outperformed non-users on the spring Diagnostic by 2.26 (Grade 3), 4.06 (Grade 4), and 4.67 (Grade 5) points, respectively (see Table 11). In addition, iRCL users also met Typical Growth targets at higher rates—by six, 10, and nine percentage points—and exceeded Stretch Growth targets by five, eight, and 11 points, respectively. These moderate and large, standardized effect sizes reflect educationally meaningful gains (Kraft, 2020).

Table 11. iRCL Treatment Effect in Grades 3–5 for the Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores

		Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Grade	***N***	***B*(SE)**	**β(SE)**	***B*(SE)**	**β(SE)**	***B*(SE)**	**β(SE)**
3	8,136	2.26 (0.83)**	0.07 (0.03)**	0.06 (0.02)**	0.13 (0.04)**	0.05 (0.02)**	0.11 (0.04)**
4	8,065	4.06 (0.91)**	0.12 (0.03)**	0.10 (0.02)**	0.20 (0.04)**	0.08 (0.02)**	0.17 (0.04)**
5	8,015	4.67 (0.98)**	0.14 (0.03)**	0.09 (0.02)**	0.19 (0.05)**	0.11 (0.02)**	0.24 (0.04)**

Note: **p < .05, *p <.1

Demographic Group Analyses

Table 12 shows the average treatment effects of iRCL for Grades 3–5 across specific student demographic groups (e.g., Black, Hispanic, Economically Disadvantaged, English Learners, and Students with Disabilities). In Grade 4, iRCL had a statistically significant positive effect across all demographic groups, with spring Diagnostic gains ranging from 3.40 to 5.65 points. iRCL users also outperformed non-users in meeting Typical Growth targets by seven to 14 percentage points. For Stretch Growth, Hispanic students, economically disadvantaged students, and English Learners saw significant gains of six to nine points (p <.05).

In Grade 5, iRCL users outperformed non-users by 4.50 to 5.27 points (p <.05) among Hispanic, Black, economically disadvantaged students, and students with disabilities. These demographic groups also met Typical Growth targets at rates eight to 11 percentage points higher than non-iRCL students. For Hispanic, Black, economically disadvantaged, English Learners, and students with disabilities, iRCL users, when compared to non-iRCL students of the same demographic group, exceeded Stretch Growth targets by six to 13 points.

In Grade 3, Hispanic students using iRCL outperformed non-users, achieving statistically significant gains across all outcomes—scoring 2.75 points higher on the spring Diagnostic and

exceeding Typical Growth and Stretch Growth targets by seven and six percentage points, respectively (p <.05). Economically disadvantaged students using iRCL also saw positive and significant gains with marginal effects: 1.55 points and four and three percentage points higher than non-iRCL students on the Diagnostic, Typical Growth and Stretch Growth outcomes, respectively (p <.10). For Black students, English Learners, and students with disabilities, iRCL had a positive but non-significant association with *i-Ready* outcomes. Across all grades, the standardized effect sizes indicate that these findings represent moderate to large, educationally meaningful differences (Kraft, 2020).

Table 12. iRCL Treatment Effect in Grades 3–5 for the Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores by Subgroup

			Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
	Grade	***N***	***B*(SE)**	**β(SE)**	***B*(SE)**	**β(SE)**	***B*(SE)**	**β(SE)**
Hispanic Students	**3**	2,780	2.75 (1.03)**	0.09 (0.03)**	0.07 (0.03)**	0.15 (0.05)**	0.06 (0.02)**	0.14 (0.05)**
	4	2,728	5.17 (1.08)**	0.16 (0.03)**	0.11 (0.03)**	0.23 (0.06)**	0.09 (0.02)**	0.19 (0.05)**
	5	2,670	5.27 (1.12)**	0.15 (0.03)**	0.10 (0.03)**	0.21 (0.06)**	0.13 (0.02)**	0.28 (0.05)**
Black Students	**3**	882	2.30 (1.45)	0.08 (0.05)	0.05 (0.03)	0.11 (0.07)	0.02 (0.03)	0.05 (0.08)
	4	917	4.02 (1.40)**	0.12 (0.04)**	0.14 (0.04)**	0.28 (0.08)**	0.02 (0.02)	0.06 (0.05)
	5	891	5.03 (1.72)**	0.15 (0.05)**	0.11 (0.05)**	0.22 (0.09)**	0.09 (0.03)**	0.19 (0.06)**
Economically Disadvantaged Students	**3**	4,575	1.55 (0.87)*	0.05 (0.03)*	0.04 (0.02)*	0.08 (0.05)*	0.03 (0.02)*	0.08 (0.05)*
	4	4,401	3.40 (0.92)**	0.10 (0.03)**	0.10 (0.02)**	0.20 (0.05)**	0.06 (0.02)**	0.14 (0.04)**
	5	4,305	4.84 (1.11)**	0.14 (0.03)**	0.10 (0.03)**	0.21 (0.06)**	0.10 (0.02)**	0.22 (0.05)**
English Learners	**3**	1,166	2.49 (1.55)	0.08 (0.05)	0.03 (0.04)	0.06 (0.08)	0.03 (0.03)	0.06 (0.07)
	4	1,115	5.65 (1.44)**	0.17 (0.04)**	0.09 (0.04)**	0.18 (0.07)**	0.09 (0.03)**	0.19 (0.06)**
	5	986	3.79 (1.90)*	0.11 (0.05)*	0.04 (0.04)	0.09 (0.09)	0.08 (0.03)**	0.17 (0.08)**

Students with a Disability	**3**	1,487	0.50 (1.29)	0.02 (0.04)	0.03 (0.03)	0.06 (0.06)	0.01 (0.02)	0.02 (0.05)
	4	1,389	3.95 (1.32)**	0.12 (0.04)**	0.07 (0.03)**	0.14 (0.06)**	0.04 (0.02)*	0.09 (0.05)*
	5	1,328	4.50 (1.29)**	0.13 (0.04)**	0.08 (0.03)**	0.17 (0.06)**	0.06 (0.03)**	0.13 (0.06)**

Note: **p < .05, *p <.1

Examining Observed Placement Levels

Table 13 compares fall and spring grade-level placements. Overall, the spring mathematics placement distributions for iRCL and non-iRCL students were similar. Most students starting at Mid or Above Grade Level in the fall remained there by spring. Among students starting at Early On Grade Level, the majority advanced to Mid or Above Grade Level (iRCL 86%, non-iRCL 84%), with a small percentage staying at Early On Grade Level (iRCL 12%, non-iRCL 14%).

Among students starting one or more grade levels below, iRCL students showed greater growth than non-iRCL students. For those starting One Grade Level Below, 73.12% of iRCL students advanced a placement level, compared to 66.86% of non-iRCL students (a 6.26-point difference). For students starting Two Grade Levels Below, 83.11% of iRCL students advanced a placement level, compared to 78.75% of non-iRCL students (a 4.36-point difference). For those starting Three or More Grade Levels Below, 65.35% of iRCL students advanced a level, compared to 62.03% of non-iRCL students (a 3.32-point difference).

Table 13. Mathematics Grade Placement in Fall and Spring (Pooled Grades 3-5)

Fall			Spring Overall Mathematics Placement Distribution				
Mathematics Placement	**iRCL/Non**	**Number of Students**	**Mid or Above Grade Level**	**Early On Grade Level**	**One Grade Level Below**	**Two Grade Levels Below**	**Three or More Grade Levels Below**
Mid or Above Grade Level	iRCL	1,195	98.58	1.34	0.08		
	Non-iRCL	2,574	98.62	1.04	0.23	0.12	
Early On Grade Level	iRCL	7,032	85.74	12.24	2.02		
	Non-iRCL	2,943	84.15	14.04	1.76	0.05	
One Grade Level Below	iRCL	2,164	36.32	36.80	25.47	1.11	0.30
	Non-iRCL	867	30.45	36.41	31.12	1.68	0.33
Two Grade Levels Below	iRCL	2,051	2.58	15.70	64.83	14.03	2.85
	Non-iRCL	7,245	2.01	11.56	65.18	17.39	3.85
	iRCL	3,139	0.28	2.36	30.13	32.58	34.66

Three or More Grade Levels Below	Non-iRCL	2,167	0.28	1.80	27.23	32.72	37.98

When examined by each grade separately, in Grade 3 and Grade 5, the spring mathematics placement distributions closely mirror those in the pooled Grades 3-5 sample, with little difference between iRCL and non-iRCL students at Mid or Above Grade Level and Early On Grade Level. However, among students starting One Grade Level Below or lower, a higher percentage of iRCL users advance to a higher placement compared to non-iRCL users (see Appendix for fall to spring placement tables).

To illustrate, among Grade 4 students, those using iRCL showed greater growth in placement levels, particularly among striving learners (see Table 14). Among fourth grade students starting One Grade Level Below, 75.6% of iRCL students advanced a placement level, compared to 69.04% of non-iRCL students, a 6.56-point difference. For those starting Two Grade Levels Below, 84.86% of iRCL students advanced compared to 77.05% of non-iRCL students, a 7.81-point difference. Among students starting Three or More Grade Levels Below, 69.86% of iRCL students advanced, compared to 62.62% of non-iRCL students, a 7.24-point difference. Overall, Grade 4 students show evidence of iRCL's impact on placement advancement.

Table 14. Mathematics Grade Placement in Fall and Spring (Grade 4)

Fall			Spring Overall Mathematics Placement Distribution				
Mathematics Placement	**iRCL/Non**	**Number of Students**	**Mid or Above Grade Level**	**Early On Grade Level**	**One Grade Level Below**	**Two Grade Levels Below**	**Three or More Grade Levels Below**
Mid or Above Grade Level	iRCL	396	98.99	1.01			
	Non-iRCL	921	99.01	0.66		0.33	
Early on Grade Level	iRCL	2,242	88.49	10.21	1.3		
	Non-iRCL	892	85.45	12.95	1.6		
One Grade Level Below	iRCL	783	34.43	41.17	23.33	0.94	0.13
	Non-iRCL	303	29.16	39.88	29.12	1.46	0.38
Two Grade Levels Below	iRCL	749	3.36	19.06	62.44	12.33	2.8
	Non-iRCL	2,397	1.71	12.91	62.43	18.68	4.27
Three or More Grade Levels Below	iRCL	937	0.38	2.04	30.91	36.53	30.14
	Non-iRCL	733	0.14	1.5	28.92	32.06	37.38

Conclusion

This study compared students across four states who used iRCL during the specified years with similar students who did not, focusing on achievement and growth on the *i-Ready Diagnostic* for Mathematics. Our findings were positive for iRCL users. In general, iRCL students outperformed non-iRCL students on the spring Diagnostic compared to students using other mathematics curricula. Students using iRCL were also predicted to outperform non-iRCL users in meeting Typical Growth and Stretch Growth targets.

iRCL demonstrated effectiveness across all student demographic groups in the sample (e.g., Black, Hispanic, Economically Disadvantaged, Students with Disabilities, and English Learners), particularly for Hispanic students, where it had a significant positive impact on the spring *i-Ready Diagnostic* for Mathematics, as well as on meeting Typical Growth and Stretch Growth targets, with moderate to large effect sizes. Growth in mathematics placement levels was evident across all grades, especially among striving learners. Furthermore, the most consistent positive associations were observed in Grades 4 and 5, where iRCL users showed improvements across most subgroups in the spring Diagnostic, Typical Growth, and Stretch Growth targets. These findings underscore the effectiveness of iRCL as a student-centered approach to mathematics. It is important to note that even where statistical significance is not met, results trend in a positive direction.

Limitations and Opportunities for Future Research

Due to data constraints, we could only assess students with access to iRCL, without verifying actual usage or the fidelity of instruction. Including implementation fidelity data would help clarify null or mixed results by confirming whether the program was delivered as intended or if other factors (e.g., curriculum flaws, misalignment with local contexts) played a role (Hill & Erickson, 2019; Mowbray et al., 2003). Future research should incorporate implementation data when evaluating iRCL and similar mathematics curricula. Additionally, this study focused solely on student characteristics, neglecting teacher, school, and neighborhood factors that also impact student growth and achievement. Considering these factors to better understand the curriculum's influence on student outcomes could further this research's impact.

As this study only includes students from four different states, findings may not generalize to other states or the United States overall. Since implementation and curriculum use can vary by state due to differing policies, studies should continue to replicate this research in other states and districts, as well as with a nationally representative sample, including diverse student populations to gain a broader understanding of how iRCL impacts student skills, growth, and achievement.

Since this study focused on Grades 3–5, its findings may not generalize to Grades 6–8, especially given differences in curriculum, resources, and school environments between elementary and middle school. Future studies should investigate how the growth and

achievement seen in Grades 3–5 can be replicated in Grades 6–8. Additionally, we observed the greatest growth in Diagnostic scores among striving learners, which should spur exploration of the underlying reasons for that growth. Understanding the specific growth patterns and mechanisms that lead to greater progress among the most disadvantaged students when using effective mathematics curricula like iRCL help the continuation of curriculum development that closes achievement gaps and builds the necessary building blocks of mathematics understanding essential for the future.

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Appendix

Section A: Sample Size Breakdown and Overall Regression Results

Table 1A. Sample Size Breakdown

	Overall		Black		Hispanic		Economically Disadvantaged		Disability		English Learners	
Grade	**iRCL**	**Non-iRCL**	**iRCL**	**Non-iRCL**	**iRCL**	**Non-iRCL**	**iRCL**	**Non-iRCL**	**iRCL**	**Non-iRCL**	**iRCL**	**Non-iRCL**
3–5	12,294	11,947	1,376	1,299	4,066	4,069	6,652	6,638	2,264	1,940	1,977	1,271
3	4,080	4,056	440	442	1,393	1,387	2,269	2,306	767	720	721	445
4	4,098	3,967	483	434	1,353	1,375	2,210	2,191	756	633	677	438
5	4,117	3,898	467	424	1,325	1,345	2,185	2,120	751	577	582	404

Table 2A. Variance Estimates from HLM Models: All Students, Hispanic, and Black Student Samples

			Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Sample	**Grades**		**B(SE)**	**β(SE)**	**B(SE)**	**β(SE)**	**B(SE)**	**β(SE)**
All Grades	3-5	σ^2	248.16	0.2	0.23	0.94	0.18	0.93
		τ_{00}	22.19	0.02	0.01	0.04	0.01	0.03
	3	σ^2	230.05	0.25	0.23	0.94	0.18	0.93
		τ_{00}	24.46	0.03	0.01	0.05	0.01	0.05
	4	σ^2	240.78	0.22	0.23	0.93	0.18	0.9
		τ_{00}	30.56	0.03	0.01	0.06	0.01	0.05
	5	σ^2	247.84	0.21	0.22	0.91	0.18	0.89
		τ_{00}	27.97	0.02	0.02	0.07	0.01	0.04
Hispanic	3-5	σ^2	266.78	0.21	0.24	0.97	0.17	0.85
		τ_{00}	18.49	0.01	0.01	0.03	0	0.02
	3	σ^2	245.58	0.26	0.23	0.95	0.16	0.85
		τ_{00}	24.76	0.03	0.01	0.05	0.01	0.04
	4	σ^2	256.61	0.23	0.23	0.95	0.16	0.81
		τ_{00}	27.54	0.03	0.02	0.06	0.01	0.04
	5	σ^2	264.17	0.22	0.23	0.95	0.17	0.84
		τ_{00}	23.73	0.02	0.01	0.05	0.01	0.04
Black	3-5	σ^2	277.9	0.22	0.24	0.99	0.12	0.62
		τ_{00}	20.91	0.02	0.01	0.03	0.00	0.01
	3	σ^2	273.64	0.29	0.25	1.01	0.12	0.65
		τ_{00}	12.1	0.01	0.00	0.00	0.01	0.05
	4	σ^2	283.17	0.26	0.24	0.98	0.12	0.62
		τ_{00}	12.77	0.01	0.01	0.03	0.00	0.00
	5	σ^2	268.67	0.22	0.23	0.98	0.11	0.57
		τ_{00}	25.37	0.02	0.01	0.06	0.00	0.01

Table 3A. Variance Estimates from HLM Models: Economically Disadvantaged, English Learners, and Students with a Disability Samples

			Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Sample	**Grades**		**B(SE)**	**β(SE)**	**B(SE)**	**β (SE)**	**B(SE)**	**β (SE)**
Economically Disadvantaged	3-5	σ^2	276.61	0.22	0.24	0.98	0.16	0.81
		τ_{00}	18.53	0.01	0.01	0.04	0.01	0.03
	3	σ^2	256.08	0.27	0.24	0.97	0.15	0.81
		τ_{00}	19.99	0.02	0.01	0.05	0.01	0.05
	4	σ^2	274.85	0.25	0.24	0.97	0.15	0.78
		τ_{00}	23.8	0.02	0.01	0.05	0.01	0.05
	5	σ^2	270.81	0.23	0.23	0.96	0.16	0.77
		τ_{00}	30.44	0.03	0.02	0.07	0.01	0.04
English Learners	3-5	σ^2	310.44	0.24	0.24	0.99	0.14	0.73
		τ_{00}	27.24	0.02	0.01	0.03	0.01	0.03
	3	σ^2	285.99	0.31	0.23	0.94	0.15	0.78
		τ_{00}	35.55	0.04	0.02	0.07	0.01	0.07
	4	σ^2	305.66	0.28	0.24	0.98	0.13	0.68
		τ_{00}	22.46	0.02	0.01	0.03	0.00	0.02
	5	σ^2	310.48	0.26	0.23	0.97	0.13	0.66
		τ_{00}	47.93	0.04	0.02	0.07	0.01	0.06
Students with a Disability	3-5	σ^2	359.04	0.28	0.24	0.99	0.14	0.69
		τ_{00}	22.7	0.02	0.01	0.03	0.00	0.02
	3	σ^2	359.99	0.38	0.24	0.97	0.14	0.74
		τ_{00}	25.19	0.03	0.01	0.04	0.00	0.01
	4	σ^2	348.08	0.32	0.24	0.99	0.14	0.69
		τ_{00}	27.64	0.03	0.01	0.04	0.00	0.02
	5	σ^2	343.54	0.29	0.24	1.01	0.13	0.64
		τ_{00}	15.3	0.01	0.00	0.02	0.01	0.03

Table 4A. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grade 3 Students

	Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Variable	***B*(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**
(Intercept)	450.14 (0.64)**	0.05 (0.02)**	0.59 (0.02)**	0.06 (0.04)	0.28 (0.02)**	0.07 (0.04)*
Use iRCL	2.26 (0.83)**	0.07 (0.03)**	0.06 (0.02)**	0.13 (0.04)**	0.05 (0.02)**	0.11 (0.04)**
Academic Year	-0.79 (0.75)	-0.03 (0.02)	-0.01 (0.02)	-0.02 (0.04)	-0.01 (0.02)	-0.03 (0.04)
American Indian or Alaska Native	-9.05 (4.86)*	-0.3 (0.16)*	-0.18 (0.15)	-0.36 (0.31)	0.03 (0.13)	0.06 (0.31)
Asian	1.58 (0.87)*	0.05 (0.03)*	0.06 (0.03)**	0.13 (0.06)**	0.05 (0.02)**	0.12 (0.06)**
Black	-2.64 (0.71)**	-0.09 (0.02)**	-0.07 (0.02)**	-0.13 (0.04)**	-0.05 (0.02)**	-0.12 (0.04)**
Hawaiian or Pacific Islander	0.79 (5.43)	0.03 (0.18)	0.12 (0.17)	0.24 (0.35)	0.15 (0.15)	0.34 (0.34)
Hispanic	-1.41 (0.54)**	-0.05 (0.02)**	-0.01 (0.02)	-0.02 (0.03)	-0.03 (0.01)**	-0.08 (0.03)**
Two or More Races	0.44 (0.7)	0.01 (0.02)	0.02 (0.02)	0.03 (0.04)	-0.01 (0.02)	-0.01 (0.04)
Economically Disadvantaged	-2.16 (0.44)**	-0.07 (0.01)**	-0.06 (0.01)**	-0.13 (0.03)**	-0.05 (0.01)**	-0.1 (0.03)**
Disability Status	-5.3 (0.51)**	-0.17 (0.02)**	-0.13 (0.02)**	-0.25 (0.03)**	-0.06 (0.01)**	-0.15 (0.03)**
English Learner Status	-1.31 (0.60)**	-0.04 (0.02)**	-0.03 (0.02)	-0.06 (0.04)	-0.03 (0.02)	-0.06 (0.04)
Base Score	0.88 (0.01)**	0.79 (0.01)**	0 (0)**	-0.06 (0.01)**	0 (0)**	0.03 (0.01)**
Conditional R^2	0.75		0.07		0.07	
Marginal R^2	0.72		0.02		0.02	
Adjusted ICC	0.10		0.05		0.05	
Unadjusted ICC	0.03		0.05		0.05	

Note: $^{**}p < .05$, $^{*}p < .1$; N = 8,136

Table 5A. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grade 4 Students

	Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Variable	***B*(SE)**	**β(SE)**	**B(SE)**	**β(SE)**	**B(SE)**	**β(SE)**
(Intercept)	469.48 (0.68)**	0.02 (0.02)	0.59 (0.02)**	0.02 (0.04)	0.29 (0.02)**	0.03 (0.04)
Use iRCL	4.06 (0.91)**	0.12 (0.03)**	0.1 (0.02)**	0.2 (0.04)**	0.08 (0.02)**	0.17 (0.04)**
Academic Year	-1.18 (0.81)	-0.04 (0.02)	-0.02 (0.02)	-0.04 (0.04)	-0.02 (0.02)	-0.04 (0.04)
American Indian or Alaska Native	3.21 (5.07)	0.10 (0.15)	0.00 (0.15)	0.01 (0.31)	0.13 (0.14)	0.29 (0.31)
Asian	1.51 (0.91)	0.05 (0.03)	0.04 (0.03)	0.09 (0.06)	0.02 (0.02)	0.04 (0.05)
Black	-4.19 (0.73)**	-0.13 (0.02)**	-0.08 (0.02)**	-0.16 (0.04)**	-0.08 (0.02)**	-0.17 (0.04)**
Hawaiian or Pacific Islander	-1.82 (6.44)	-0.06 (0.19)	-0.01 (0.2)	-0.03 (0.4)	-0.05 (0.17)	-0.10 (0.39)
Hispanic	-1.5 (0.56)**	-0.05 (0.02)**	-0.03 (0.02)*	-0.06 (0.03)*	-0.03 (0.01)*	-0.06 (0.03)*
Two or More Races	0.01 (0.68)	0.00 (0.02)	-0.01 (0.02)	-0.02 (0.04)	0.02 (0.02)	0.05 (0.04)
Economically Disadvantaged	-1.91 (0.45)**	-0.06 (0.01)**	-0.06 (0.01)**	-0.12 (0.03)**	-0.04 (0.01)**	-0.10 (0.03)**
Disability Status	-4.75 (0.54)**	-0.14 (0.02)**	-0.08 (0.02)**	-0.16 (0.03)**	-0.04 (0.01)**	-0.09 (0.03)**
English Learner Status	-1.49 (0.64)**	-0.04 (0.02)**	-0.02 (0.02)	-0.04 (0.04)	-0.03 (0.02)*	-0.07 (0.04)*
Base Score	0.92 (0.01)**	0.81 (0.01)**	0.00 (0.00)**	-0.04 (0.01)**	0.00 (0.00)**	0.13 (0.01)**
Conditional R^2	0.77		0.08		0.10	
Marginal R^2	0.75		0.02		0.05	
Adjusted ICC	0.11		0.06		0.05	
Unadjusted ICC	0.03		0.06		0.05	

Note: **p < .05, *p <.1; N = 8,065

Table 6A. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grade 5 Students

	Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Variable	***B*(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**
(Intercept)	484.63 (0.67)**	0.04 (0.02)*	0.65 (0.02)**	0.08 (0.04)**	0.31 (0.02)**	0.07 (0.04)**
Use iRCL	4.67 (0.98)**	0.14 (0.03)**	0.09 (0.02)**	0.19 (0.05)**	0.11 (0.02)**	0.24 (0.04)**
Academic Year	-2.87 (0.83)**	-0.08 (0.02)**	-0.06 (0.02)**	-0.13 (0.04)**	-0.06 (0.02)**	-0.14 (0.04)**
American Indian or Alaska Native	-0.21 (5.29)	-0.01 (0.15)	-0.09 (0.16)	-0.19 (0.32)	-0.11 (0.14)	-0.25 (0.32)
Asian	1.51 (0.95)	0.04 (0.03)	0.03 (0.03)	0.06 (0.06)	0.04 (0.03)*	0.1 (0.06)*
Black	-2.03 (0.73)**	-0.06 (0.02)**	-0.02 (0.02)	-0.05 (0.04)	-0.06 (0.02)**	-0.14 (0.04)**
Hawaiian or Pacific Islander	4.31 (4.15)	0.12 (0.12)	0.21 (0.12)*	0.43 (0.25)*	0.06 (0.11)	0.13 (0.25)
Hispanic	-0.91 (0.55)	-0.03 (0.02)	-0.01 (0.02)	-0.03 (0.03)	-0.03 (0.01)**	-0.06 (0.03)**
Two or More Races	-1.11 (0.70)	-0.03 (0.02)	-0.04 (0.02)*	-0.08 (0.04)*	-0.02 (0.02)	-0.04 (0.04)
Economically Disadvantaged	-1.72 (0.46)**	-0.05 (0.01)**	-0.05 (0.01)**	-0.1 (0.03)**	-0.03 (0.01)**	-0.08 (0.03)**
Disability Status	-4.46 (0.55)**	-0.13 (0.02)**	-0.09 (0.02)**	-0.18 (0.03)**	-0.05 (0.01)**	-0.11 (0.03)**
English Learner Status	-1.10 (0.67)	-0.03 (0.02)	-0.02 (0.02)	-0.05 (0.04)	-0.02 (0.02)	-0.04 (0.04)
Base Score	0.96 (0.01)**	0.84 (0.01)**	0.00 (0.00)**	0.04 (0.01)**	0.00 (0.00)**	0.16 (0.01)**
Conditional R^2	0.79		0.10		0.11	
Marginal R^2	0.77		0.03		0.07	
Adjusted ICC	0.10		0.07		0.05	
Unadjusted ICC	0.02		0.07		0.04	

Note: $^{**}p < .05$, $^{*}p < .1$; N = 8,015

Section B: Subgroup Regression Outputs

Table 1B. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grades 3-5 Hispanic Students

		Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Grade	**Variable**	***B*(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**
3-5 (*N*=8,135)	(Intercept)	453.72 (0.42)**	-0.08 (0.01)**	0.53 (0.01)**	-0.09 (0.02)**	0.19 (0.01)**	-0.14 (0.02)**
	Use iRCL	4.21 (0.76)**	0.12 (0.02)**	0.09 (0.02)**	0.19 (0.04)**	0.09 (0.01)**	0.2 (0.03)**
	Academic Year	-1.75 (0.64)**	-0.05 (0.02)**	-0.04 (0.02)**	-0.08 (0.03)**	-0.01 (0.01)	-0.03 (0.03)
	Base Score	0.92 (0.01)**	0.86 (0.01)**	0 (0)*	0.02 (0.01)*	0 (0)**	0.1 (0.01)**
	Cond. R^2	0.77		0.05		0.05	
	Marginal R^2	0.76		0.01		0.02	
	Adj. ICC	0.06		0.03		0.03	
	Unadj. ICC	0.02		0.03		0.03	
3 (*N*=2,780)	(Intercept)	436.84 (0.64)**	-0.07 (0.02)**	0.53 (0.02)**	-0.06 (0.04)	0.19 (0.01)**	-0.12 (0.03)**
	Use iRCL	2.75 (1.03)**	0.09 (0.03)**	0.07 (0.03)**	0.15 (0.05)**	0.06 (0.02)**	0.14 (0.05)**
	Academic Year	-2.33 (0.92)**	-0.08 (0.03)**	-0.05 (0.02)**	-0.11 (0.05)**	-0.02 (0.02)	-0.05 (0.05)
	Base Score	0.92 (0.01)**	0.83 (0.01)**	0 (0)	0 (0.02)	0 (0)**	0.07 (0.02)**
	Cond. R^2	0.72		0.05		0.05	
	Marginal R^2	0.69		0.01		0.01	
	Adj. ICC	0.09		0.05		0.04	
	Unadj. ICC	0.03		0.04		0.04	
4 (*N*=2,728)	(Intercept)	454.56 (0.66)**	-0.09 (0.02)**	0.52 (0.02)**	-0.14 (0.04)**	0.19 (0.01)**	-0.15 (0.03)**
	Use iRCL	5.17 (1.08)**	0.16 (0.03)**	0.11 (0.03)**	0.23 (0.06)**	0.09 (0.02)**	0.19 (0.05)**
	Academic Year	-0.93 (0.96)	-0.03 (0.03)	-0.03 (0.03)	-0.06 (0.05)	-0.01 (0.02)	-0.02 (0.05)
	Base Score	0.95 (0.01)**	0.83 (0.01)**	0 (0)	-0.01 (0.02)	0 (0)**	0.11 (0.02)**
	Cond. R^2	0.75		0.08		0.07	
	Marginal R^2	0.73		0.01		0.02	
	Adj. ICC	0.10		0.06		0.05	
	Unadj. ICC	0.03		0.06		0.05	
5 (*N*=2,670)	(Intercept)	471.04 (0.66)**	-0.06 (0.02)**	0.56 (0.02)**	-0.08 (0.04)**	0.2 (0.02)**	-0.14 (0.03)**
	Use iRCL	5.27 (1.12)**	0.15 (0.03)**	0.1 (0.03)**	0.21 (0.06)**	0.13 (0.02)**	0.28 (0.05)**
	Academic Year	-1.75 (0.98)*	-0.05 (0.03)*	-0.02 (0.03)	-0.03 (0.05)	-0.02 (0.02)	-0.04 (0.05)
	Base Score	0.98 (0.01)**	0.85 (0.01)**	0 (0)**	0.06 (0.02)**	0 (0)**	0.14 (0.02)**
	Cond. R^2	0.75		0.07		0.08	
	Marginal R^2	0.73		0.01		0.04	
	Adj. ICC	0.08		0.05		0.04	
	Unadj. ICC	0.02		0.05		0.04	

Note: **p < .05, *p <.1; ICC—Intraclass Correlation Coefficient, Adj.—Adjusted, Unadj.—Unadjusted, Cond.—Conditional

Table 2B. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grades 3-5 Black Students

		Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Grade	**Variable**	***B*(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**
3-5 (*N*=2,675)	(Intercept)	447.8 (2.08)**	-0.1 (0.06)*	0.53 (0.06)**	-0.12 (0.12)	0.24 (0.04)**	-0.03 (0.09)
	Use iRCL	4.31 (1.08)**	0.12 (0.03)**	0.1 (0.03)**	0.21 (0.05)**	0.04 (0.02)**	0.1 (0.04)**
	Academic Year	-3.49 (2.09)	-0.1 (0.06)	-0.1 (0.06)	-0.19 (0.12)	-0.12 (0.04)**	-0.27 (0.09)**
	Base Score	0.9 (0.01)**	0.84 (0.01)**	0 (0)	-0.01 (0.02)	0 (0)**	0.05 (0.02)**
	Cond. R^2	0.75		0.04		0.03	
	Marginal R^2	0.73		0.01		0.01	
	Adj. ICC	0.07		0.03		0.02	
	Unadj. ICC	0.02		0.03		0.02	
3 (*N*=882)	(Intercept)	433.02 (3.4)**	-0.06 (0.11)	0.51 (0.1)**	-0.12 (0.2)	0.18 (0.07)**	-0.12 (0.17)
	Use iRCL	2.3 (1.45)	0.08 (0.05)	0.05 (0.03)	0.11 (0.07)	0.02 (0.03)	0.05 (0.08)
	Academic Year	-3.69 (3.41)	-0.12 (0.11)	-0.08 (0.1)	-0.17 (0.2)	-0.03 (0.07)	-0.06 (0.17)
	Base Score	0.92 (0.02)**	0.82 (0.02)**	0 (0)	-0.03 (0.04)	0 (0)**	0.08 (0.03)**
	Cond. R^2	0.68				0.08	
	Marginal R^2	0.66		0		0.01	
	Adj. ICC	0.04				0.07	
	Unadj. ICC	0.01				0.07	
4 (*N*=917)	(Intercept)	446.48 (3.42)**	-0.29 (0.1)**	0.48 (0.1)**	-0.24 (0.2)	0.16 (0.07)**	-0.23 (0.15)
	Use iRCL	4.02 (1.4)**	0.12 (0.04)**	0.14 (0.04)**	0.28 (0.08)**	0.02 (0.02)	0.06 (0.05)
	Academic Year	1.88 (3.42)	0.06 (0.1)	-0.06 (0.1)	-0.13 (0.2)	-0.03 (0.07)	-0.06 (0.15)
	Base Score	0.9 (0.02)**	0.79 (0.02)**	0 (0)	-0.05 (0.04)	0 (0)*	0.05 (0.03)*
	Cond. R^2	0.68		0.05		0.01	
	Marginal R^2	0.66		0.02		0.01	
	Adj. ICC	0.04		0.03		0.01	
	Unadj. ICC	0.01		0.03		0.01	
5 (*N*=891)	(Intercept)	465.86 (3.27)**	0.05 (0.09)	0.63 (0.09)**	0.05 (0.19)	0.34 (0.06)**	0.18 (0.14)
	Use iRCL	5.03 (1.72)**	0.15 (0.05)**	0.11 (0.05)**	0.22 (0.09)**	0.09 (0.03)**	0.19 (0.06)**
	Academic Year	-8.66 (3.27)**	-0.25 (0.09)**	-0.16 (0.09)*	-0.34 (0.19)*	-0.25 (0.06)**	-0.55 (0.14)**
	Base Score	0.95 (0.02)**	0.83 (0.02)**	0 (0)	0.02 (0.04)	0 (0)**	0.07 (0.03)**
	Cond. R^2	0.76		0.07		0.06	
	Marginal R^2	0.73		0.02		0.04	
	Adj. ICC	0.09		0.06		0.02	
	Unadj. ICC	0.02		0.06		0.02	

Note: $^{**}p < .05$, $^{*}p < .1$; ICC—Intraclass Correlation Coefficient, Adj.—Adjusted, Unadj.—Unadjusted, Cond.—Conditional

Table 3B. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grades 3-5 Students Considered Economically Disadvantaged

		Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Grade	**Variable**	***B*(SE)**	**β(SE)**	**B(SE)**	**β(SE)**	**B(SE)**	**β(SE)**
3-5 (*N*=13,290)	(Intercept)	454.01 (0.46)**	-0.07 (0.01)**	0.53 (0.01)**	-0.11 (0.03)**	0.2 (0.01)**	-0.12 (0.02)**
	Use iRCL	3.15 (0.69)**	0.09 (0.02)**	0.08 (0.02)**	0.15 (0.03)**	0.06 (0.01)**	0.14 (0.03)**
	Academic Year	-1.51 (0.61)**	-0.04 (0.02)**	-0.04 (0.02)**	-0.07 (0.03)**	-0.03 (0.01)**	-0.07 (0.03)**
	Base Score	0.92 (0)**	0.86 (0)**	0 (0)	0.01 (0.01)	0 (0)**	0.09 (0.01)**
	Cond. R^2	0.76		0.04		0.05	
	Marginal R^2	0.75		0.01		0.02	
	Adj. ICC	0.06		0.04		0.03	
	Unadj. ICC	0.02		0.04		0.03	
3 (*N*=4,575)	(Intercept)	437.52 (0.68)**	-0.06 (0.02)**	0.52 (0.02)**	-0.08 (0.04)**	0.21 (0.02)**	-0.08 (0.04)**
	Use iRCL	1.55 (0.87)*	0.05 (0.03)*	0.04 (0.02)*	0.08 (0.05)*	0.03 (0.02)*	0.08 (0.05)*
	Academic Year	-1.38 (0.82)	-0.04 (0.03)	-0.03 (0.02)	-0.07 (0.05)	-0.03 (0.02)	-0.07 (0.04)
	Base Score	0.92 (0.01)**	0.82 (0.01)**	0 (0)	-0.02 (0.02)	0 (0)**	0.07 (0.01)**
	Cond. R^2	0.71		0.05		0.06	
	Marginal R^2	0.68		0		0.01	
	Adj. ICC	0.07		0.05		0.06	
	Unadj. ICC	0.02		0.04		0.06	
4 (*N*=4,401)	(Intercept)	455.61 (0.71)**	-0.09 (0.02)**	0.52 (0.02)**	-0.14 (0.04)**	0.19 (0.02)**	-0.15 (0.04)**
	Use iRCL	3.4 (0.92)**	0.1 (0.03)**	0.1 (0.02)**	0.2 (0.05)**	0.06 (0.02)**	0.14 (0.04)**
	Academic Year	-1.23 (0.87)	-0.04 (0.03)	-0.03 (0.02)	-0.07 (0.05)	-0.01 (0.02)	-0.03 (0.04)
	Base Score	0.95 (0.01)**	0.83 (0.01)**	0 (0)	-0.01 (0.02)	0 (0)**	0.1 (0.01)**
	Cond. R^2	0.72		0.06		0.07	
	Marginal R^2	0.7		0.01		0.02	
	Adj. ICC	0.08		0.05		0.06	
	Unadj. ICC	0.02		0.04		0.06	
5 (*N*=4,305)	(Intercept)	470.67 (0.75)**	-0.06 (0.02)**	0.55 (0.02)**	-0.09 (0.04)**	0.21 (0.02)**	-0.1 (0.04)**
	Use iRCL	4.84 (1.11)**	0.14 (0.03)**	0.1 (0.03)**	0.21 (0.06)**	0.1 (0.02)**	0.22 (0.05)**
	Academic Year	-2.66 (0.96)**	-0.08 (0.03)**	-0.05 (0.03)*	-0.1 (0.05)*	-0.05 (0.02)**	-0.12 (0.04)**
	Base Score	0.97 (0.01)**	0.85 (0.01)**	0 (0)**	0.05 (0.02)**	0 (0)**	0.13 (0.01)**
	Cond. R^2	0.75		0.08		0.09	
	Marginal R^2	0.72		0.01		0.04	
	Adj. ICC	0.1		0.07		0.05	
	Unadj. ICC	0.03		0.07		0.05	

Note: **p < .05, *p <.1; ICC—Intraclass Correlation Coefficient, Adj.—Adjusted, Unadj.—Unadjusted, Cond.—Conditional

Table 4B. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grades 3-5 Students Considered English Learners

		Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Grade	**Variable**	***B*(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**
3-5 (*N*=3,248)	(Intercept)	439.24 (0.72)**	-0.14 (0.02)**	0.52 (0.02)**	-0.14 (0.04)**	0.17 (0.01)**	-0.21 (0.03)**
	Use iRCL	4.41 (1.12)**	0.12 (0.03)**	0.06 (0.02)**	0.13 (0.05)**	0.06 (0.02)**	0.14 (0.04)**
	Academic Year	-1.58 (1.07)	-0.04 (0.03)	-0.04 (0.02)*	-0.08 (0.05)*	-0.04 (0.02)**	-0.09 (0.04)**
	Base Score	0.88 (0.01)**	0.83 (0.01)**	0 (0)	-0.03 (0.02)	0 (0)	0.01 (0.02)
	Cond. R^2	0.71		0.03		0.05	
	Marginal R^2	0.68		0.01		0.01	
	Adj. ICC	0.08		0.03		0.04	
	Unadj. ICC	0.03		0.03		0.04	
3 (*N*=1,166)	(Intercept)	426.19 (1.1)**	-0.09 (0.04)**	0.52 (0.03)**	-0.07 (0.06)	0.19 (0.02)**	-0.1 (0.06)*
	Use iRCL	2.49 (1.55)	0.08 (0.05)	0.03 (0.04)	0.06 (0.08)	0.03 (0.03)	0.06 (0.07)
	Academic Year	-1.77 (1.52)	-0.06 (0.05)	-0.02 (0.04)	-0.04 (0.08)	-0.01 (0.03)	-0.03 (0.07)
	Base Score	0.93 (0.02)**	0.83 (0.02)**	0 (0)	0.03 (0.03)	0 (0)*	0.06 (0.03)*
	Cond. R^2	0.68		0.07		0.08	
	Marginal R^2	0.64		0.00		0.00	
	Adj. ICC	0.11		0.07		0.08	
	Unadj. ICC	0.04		0.07		0.08	
4 (*N*=1,115)	(Intercept)	439.23 (1.07)**	-0.21 (0.03)**	0.51 (0.03)**	-0.21 (0.06)**	0.13 (0.02)**	-0.33 (0.05)**
	Use iRCL	5.65 (1.44)**	0.17 (0.04)**	0.09 (0.04)**	0.18 (0.07)**	0.09 (0.03)**	0.19 (0.06)**
	Academic Year	0.57 (1.46)	0.02 (0.04)	-0.03 (0.04)	-0.07 (0.07)	-0.03 (0.03)	-0.06 (0.06)
	Base Score	0.88 (0.02)**	0.77 (0.02)**	0 (0)**	-0.08 (0.03)**	0 (0)	-0.02 (0.03)
	Cond. R^2	0.67		0.05		0.04	
	Marginal R^2	0.65		0.01		0.01	
	Adj. ICC	0.07		0.03		0.02	
	Unadj. ICC	0.02		0.03		0.02	
5 (*N*=986)	(Intercept)	455.28 (1.26)**	-0.11 (0.04)**	0.55 (0.03)**	-0.12 (0.07)*	0.18 (0.02)**	-0.17 (0.06)**
	Use iRCL	3.79 (1.9)*	0.11 (0.05)*	0.04 (0.04)	0.09 (0.09)	0.08 (0.03)**	0.17 (0.08)**
	Academic Year	-3.44 (1.83)*	-0.1 (0.05)*	-0.07 (0.04)	-0.14 (0.09)	-0.08 (0.03)**	-0.19 (0.08)**
	Base Score	0.91 (0.02)**	0.8 (0.02)**	0 (0)	-0.01 (0.04)	0 (0)	0.05 (0.03)
	Cond. R^2	0.68		0.07		0.11	
	Marginal R^2	0.63		0.01		0.02	
	Adj. ICC	0.13		0.06		0.09	
	Unadj. ICC	0.05		0.06		0.08	

Note: **p < .05, *p <.1; ICC—Intraclass Correlation Coefficient, Adj.—Adjusted, Unadj.—Unadjusted, Cond.—Conditional

Table 5B. HLM Regressions of Spring *i-Ready Diagnostic* Score, Percentage Meeting Typical Growth and Stretch Growth Scores on iRCL Use for Grades 3-5 Students with a Disability

		Spring Diagnostic Score		Meet Typical Growth		Meet Stretch Growth	
Grade	**Variable**	***B*(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**	**B(SE)**	***β*(SE)**
3-5 (*N*=4,204)	(Intercept)	437.54 (0.84)**	-0.15 (0.02)**	0.49 (0.02)**	-0.15 (0.04)**	0.16 (0.01)**	-0.18 (0.03)**
	Use iRCL	2.57 (0.9)**	0.07 (0.03)**	0.06 (0.02)**	0.11 (0.04)**	0.03 (0.01)**	0.07 (0.03)**
	Academic Year	-0.63 (0.95)	-0.02 (0.03)	-0.05 (0.02)**	-0.1 (0.04)**	-0.01 (0.02)	-0.02 (0.04)
	Base Score	0.93 (0.01)**	0.87 (0.01)**	0 (0)**	0.04 (0.02)**	0 (0)**	0.08 (0.01)**
	Cond. R^2	0.76		0.03		0.04	
	Marginal R^2	0.74		0.01		0.01	
	Adj. ICC	0.06		0.02		0.02	
	Unadj. ICC	0.02		0.02		0.02	
3 (*N*=1,487)	(Intercept)	423.27 (1.33)**	-0.13 (0.04)**	0.48 (0.03)**	-0.14 (0.07)**	0.17 (0.02)**	-0.11 (0.06)*
	Use iRCL	0.5 (1.29)	0.02 (0.04)	0.03 (0.03)	0.06 (0.06)	0.01 (0.02)	0.02 (0.05)
	Academic Year	0.06 (1.44)	0 (0.05)	-0.04 (0.03)	-0.09 (0.07)	0 (0.02)	0 (0.06)
	Base Score	0.95 (0.02)**	0.86 (0.01)**	0 (0)	0.03 (0.02)	0 (0)**	0.1 (0.02)**
	Cond. R^2	0.72		0.04		0.03	
	Marginal R^2	0.70		0.00		0.02	
	Adj. ICC	0.07		0.04		0.01	
	Unadj. ICC	0.02		0.04		0.01	
4 (*N*=1,389)	(Intercept)	438.55 (1.34)**	-0.16 (0.04)**	0.5 (0.03)**	-0.16 (0.07)**	0.16 (0.02)**	-0.16 (0.06)**
	Use iRCL	3.95 (1.32)**	0.12 (0.04)**	0.07 (0.03)**	0.14 (0.06)**	0.04 (0.02)*	0.09 (0.05)*
	Academic Year	-1.01 (1.46)	-0.03 (0.04)	-0.05 (0.04)	-0.09 (0.07)	-0.02 (0.03)	-0.04 (0.06)
	Base Score	0.96 (0.02)**	0.84 (0.01)**	0 (0)	0.01 (0.02)	0 (0)**	0.1 (0.02)**
	Cond. R^2	0.75		0.04		0.04	
	Marginal R^2	0.73		0.01		0.02	
	Adj. ICC	0.07		0.04		0.03	
	Unadj. ICC	0.02		0.04		0.03	
5 (*N*=1,328)	(Intercept)	452.91 (1.28)**	-0.12 (0.04)**	0.52 (0.03)**	-0.1 (0.07)	0.15 (0.02)**	-0.19 (0.06)**
	Use iRCL	4.5 (1.29)**	0.13 (0.04)**	0.08 (0.03)**	0.17 (0.06)**	0.06 (0.03)**	0.13 (0.06)**
	Academic Year	-2.73 (1.37)*	-0.08 (0.04)*	-0.09 (0.03)**	-0.18 (0.07)**	-0.02 (0.03)	-0.05 (0.06)
	Base Score	0.99 (0.02)**	0.86 (0.01)**	0 (0)**	0.08 (0.03)**	0 (0)**	0.1 (0.02)**
	Cond. R^2	0.75		0.04		0.07	
	Marginal R^2	0.74		0.02		0.02	
	Adj. ICC	0.04		0.02		0.04	
	Unadj. ICC	0.01		0.02		0.04	

Note: **p < .05, *p <.1; ICC—Intraclass Correlation Coefficient, Adj.—Adjusted, Unadj.—Unadjusted, Cond.—Conditional

Section C: Mathematics Placement Distribution Tables

Table 1C. Mathematics Grade Placement in Fall and Spring (Grade 3)

Fall			Spring Overall Mathematics Placement Distribution				
Mathematics Placement	**iRCL/Non-iRCL**	**Number of Students**	**Mid or Above Grade Level**	**Early On Grade Level**	**One Grade Level Below**	**Two Grade Levels Below**	**Three or More Grade Levels Below**
Mid or Above Grade Level	iRCL	187	97.86	2.14			
	Non-iRCL	560	98.59	0.7	0.7		
Early On Grade Level	iRCL	2,706	94.29	5.18	0.54		
	Non-iRCL	1291	88.17	11.18	0.65		
One Grade Level Below	iRCL	579	41.61	31.82	25.98	0.44	0.15
	Non-iRCL	142	36.66	32.86	29.93	0.51	0.04
Two Grade Levels Below	iRCL	465	2.48	13.71	69.25	12.47	2.09
	Non-iRCL	2,733	2.17	11.52	69.63	14.58	2.09
Three or More Grade Levels Below	iRCL	1337		1.38	31.95	35.92	30.74
	Non-iRCL	584	0.17	1.03	33.05	36.47	29.28

Table 2C. Mathematics Grade Placement in Fall and Spring (Grade 5)

Fall			Spring Overall Mathematics Placement Distribution				
Mathematics Placement	**iRCL/Non-iRCL**	**Number of Students**	**Mid or Above Grade Level**	**Early On Grade Level**	**One Grade Level Below**	**Two Grade Levels Below**	**Three or More Grade Levels Below**
Mid or Above Grade Level	iRCL	614	98.53	1.3	0.16		
	Non-iRCL	1,063	98.55	1.45			
Early On Grade Level	iRCL	2,059	80.34	16.46	3.2		
	Non-iRCL	780	80.55	16.73	2.61	0.12	
One Grade Level Below	iRCL	808	31.91	37.69	27.39	2.33	0.68
	Non-iRCL	413	23.45	37.71	34.71	3.52	0.61
Two Grade Levels Below	iRCL	843	1.67	15.9	60.13	18.33	3.97
	Non-iRCL	2,132	2.13	10.41	62.01	19.64	5.8
Three or More Grade Levels Below	iRCL	845	0.37	3.47	27.72	26.61	41.83
	Non-iRCL	830	0.48	1.93	21.45	30.84	45.3