Predicting Proficiency on the New Mexico Measures of Student Success and Achievement (NM-MSSA) in Grades 3–8 Based on NWEA MAP Growth Scores

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NWEA Psychometrics and Analytics

Linking Study Updates

Date	Description
2023-09	Initial study conducted for New Mexico in mathematics and ELA in grades 3–8 using Spring 2022 data.
2025-08	Updated the linking study based on the 2025 norms.

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Executive Summary

Linking studies allow partners to use MAP® Growth™ Rasch Unit (RIT) scores throughout the year to predict students' likely performance levels on state summative assessments. This is accomplished through statistical analyses that produce RIT cut scores corresponding to the state summative performance levels. A "cut score" is the minimum score a student must get on a test to be placed at a certain performance level. The linking study for the New Mexico Measures of Student Success and Achievement (NM-MSSA) assessment described in this report provides RIT cut scores for the fall, winter, and spring MAP Growth administrations that correspond to the NM-MSSA performance levels for mathematics and English language arts (ELA)/reading in grades 3–8.

The linking study is based on test scores from students who took both the MAP Growth and NM-MSSA assessments in Spring 2022 for the targeted grades. The linking study sample included 10,309 students across 13 districts and 33 schools in New Mexico. Scores from both tests were used as the basis for linking the two assessments.

Before the linking analyses began, NWEA confirmed that the MAP Growth and NM-MSSA assessments were aligned based on the same or similar set of content standards to warrant a connection. The test links were further investigated by calculating the Pearson correlation coefficients that relate the relationship between the specific MAP Growth and NM-MSSA test scores. At NWEA, a correlation of $r \geq 0.70$ is considered a "high" correlation and acceptable for publishing. This indicates that students who perform well on one assessment also tend to perform well on the other, and vice versa. A perfect positive correlation is 1.00. The correlations between the MAP Growth and NM-MSSA test scores from Spring 2022, as shown in Figure E.1, are consistent with the expectations that MAP Growth is a good assessment for predicting performance on the NM-MSSA tests.

Figure E.1. Correlations Between MAP Growth and NM-MSSA Scores
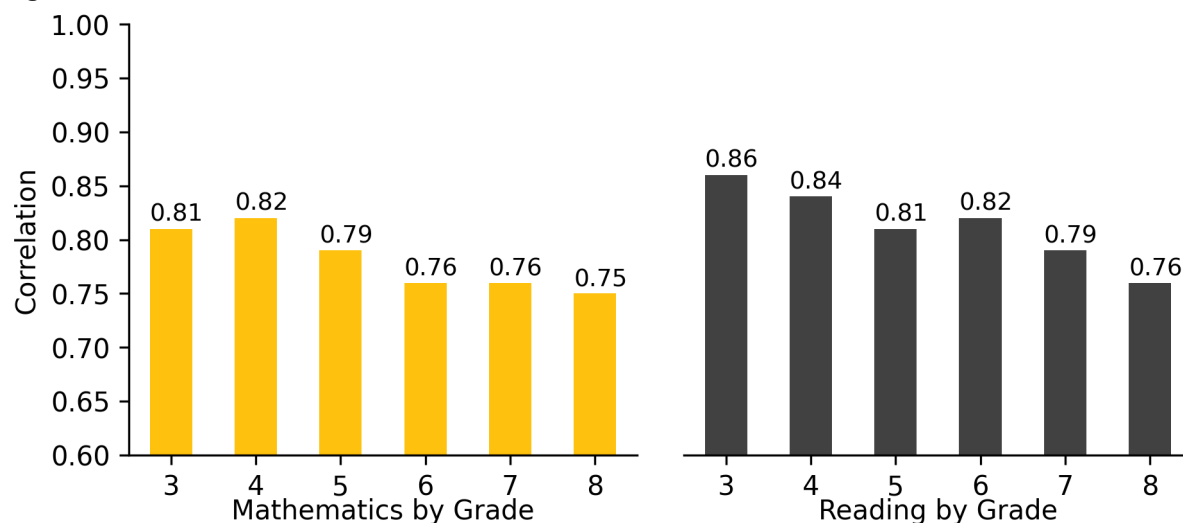
The equipercentile linking method (Kolen & Brennan, 2004) was used to produce the RIT cut scores for the spring administration that correspond to performance levels on the NM-MSSA summative assessments for every subject and grade. MAP Growth cut scores for grade 2, as well as those for the fall and winter administrations of all grades, are also provided so that educators can track grade 2 students' progress on the NM-MSSA tests by grade 3, alongside all other students, early in the year. These cut scores were derived from the spring cuts[1] and the growth norms for the adjacent grades (i.e., grades 2 to 3), or fall and winter administrations to the spring administration. While RIT cut scores were generated for every performance level on the NM-MSSA summative assessment, Table E.1 presents the *Proficient* cut scores that indicate the minimum score a student must get to be considered proficient for accountability purposes.

Table E.1. MAP Growth RIT Cut Scores for NM-MSSA Proficiency

Assessment		*Proficient* Cut Scores by Grade						
		2	3	4	5	6	7	8
Mathematics								
NM-MSSA Spring		–	360	460	560	660	760	860
MAP Growth	Fall	187	196	208	212	216	223	236
	Winter	195	205	216	218	222	227	241
	Spring	200	211	221	222	226	230	243
ELA/Reading								
NM-MSSA Spring		–	360	460	560	660	760	860
MAP Growth	Fall	175	189	198	207	215	216	221
	Winter	182	195	202	209	216	217	222
	Spring	186	198	204	211	217	218	223

Educators can use these cut scores to determine whether students are on track for proficiency (*Proficient* or higher) on the state assessment. For example, the *Proficient* cut score on the grade 3 NM-MSSA mathematics test is 360. A grade 3 student with a MAP Growth mathematics RIT score of 196 in the fall is likely to meet proficiency on the NM-MSSA mathematics test in the spring, whereas a grade 3 student with a RIT score lower than 196 in the fall is in jeopardy of not meeting proficiency. MAP Growth cut scores for grade 2 are also provided so that educators can track early learners' progress toward proficiency on the NM-MSSA assessment by grade 3.

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[1] To enhance content validity, NWEA developed an Enhanced Item-Selection Algorithm (EISA) for the MAP Growth assessment to prioritize grade-level content. A pilot study (Meyer et al., 2023) showed that students taking MAP Growth with EISA demonstrated higher average math scores compared with those taking traditional MAP Growth. To improve score comparability, NWEA (Lewis & Kuhfeld, 2024) developed concordance tables to adjust mathematics scores from traditional assessments to align with scores from MAP Growth with EISA, or vice versa. Given that the data for this study were collected from traditional MAP Growth tests but that the results will be used for MAP Growth with EISA, the spring cuts for mathematics were adjusted using the concordance tables before being used to derive other cut scores. This score adjustment will become unnecessary for future linking studies once the new data from EISA tests are collected.

As further evidence that MAP Growth scores can be used to predict students' proficiency on the state test, NWEA calculated classification accuracy statistics that show how well the RIT scores can correctly classify, or predict, students as proficient (*Proficient* or higher) on the state tests.[2] For example, the grade 3 MAP Growth mathematics cut score has a 0.88 accuracy rate, meaning it accurately predicted student performance on the NM-MSSA mathematics test for 88% of the sample. A high statistic indicates high accuracy. Overall, MAP Growth scores have a high accuracy rate of identifying student proficiency on the NM-MSSA tests, as illustrated in Figure E.2.

Figure E.2. Accuracy of MAP Growth Classifications
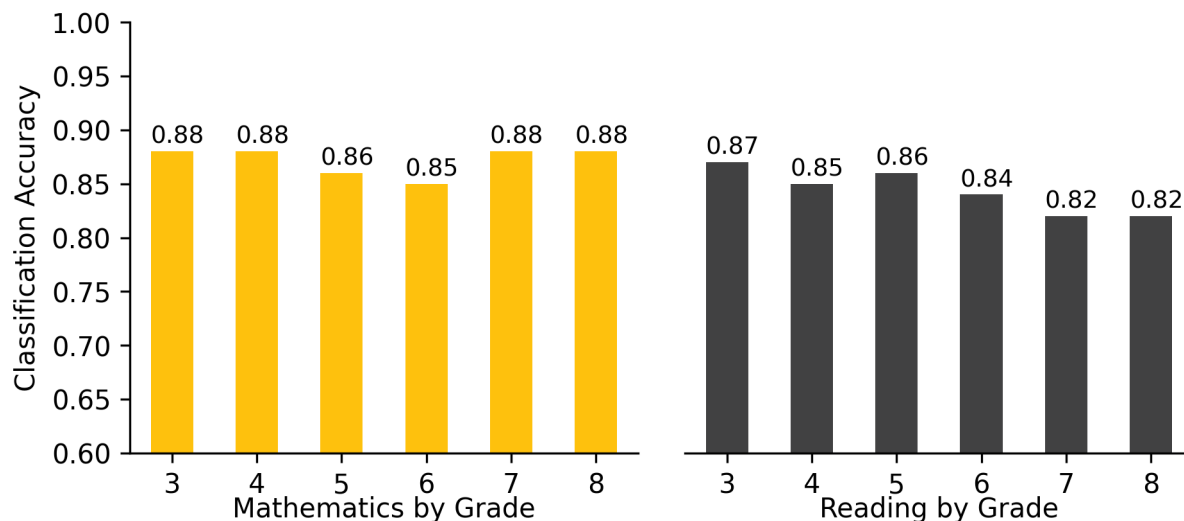
Please note that the purpose of this report is to explain NWEA's linking study methodology. It is not meant as the main reference for determining a student's likely performance on the state summative assessment. The cut scores in this report are based on the default instructional weeks most encountered for each term (i.e., Weeks 4, 20, and 32 for fall, winter, and spring, respectively), whereas instructional weeks often vary by district. The cut scores in this report may therefore differ from the results in the NWEA reporting system that reflect the specific instructional weeks set by partners. Partners should therefore reference their MAP Growth score reports instead.

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[2] The classification accuracy calculations for the mathematics spring cuts were based on the concorded cut scores.

1. Introduction

1.1. Purpose of the Study

NWEA® is committed to providing partners with useful tools to help make inferences about student learning from MAP® Growth™ test scores. One important use of MAP Growth results is to predict a student's performance on the state summative assessment at different times throughout the year. This allows educators and parents to determine if a student is on track in their learning to meet state standards by the end of the year or, given a student's learning profile, is on track to obtain rigorous, realistic growth in their content knowledge and skills.

This report presents results from a linking study conducted by NWEA to statistically connect Rasch Unit (RIT) scores from the MAP Growth assessments with scores from the New Mexico Measures of Student Success and Achievement (NM-MSSA) mathematics and English language arts (ELA)/reading assessment in grades 3–8 taken during the Spring 2022 term. MAP Growth cut scores are also included for grade 2 so that educators can track early learners' progress toward proficiency on the NM-MSSA tests by grade 3. Specifically, this report presents the following results:

1. Student sample demographics
2. Descriptive statistics of test scores
3. MAP Growth cut scores from fall, winter, and spring that correspond to the performance levels on the spring NM-MSSA assessment
4. Classification accuracy statistics to determine the degree to which MAP Growth accurately predicts student proficiency status on the NM-MSSA assessment
5. The probability of achieving grade-level proficiency on the NM-MSSA assessment based on MAP Growth RIT scores from fall, winter, and spring

1.2. Assessment Overview

The NM-MSSA grades 3–8 mathematics and ELA tests are New Mexico's state summative assessments aligned to the New Mexico's Learning Standards. Based on their test scores, students are placed into one of four performance levels: *Novice*, *Nearing Proficiency*, *Proficient*, and *Advanced*. The *Proficient* cut score demarks the minimum level of achievement considered to be proficient for accountability purposes.

MAP Growth tests are adaptive interim assessments aligned to state-specific content standards and administered in the fall, winter, and spring. Scores are reported on the RIT vertical scale with a range of 100 to 350. NWEA conducts norming studies of student and school performance on MAP Growth assessments to aid the interpretation of scores. Growth norms provide expected score gains for a test from term to term, such as from fall to spring terms. The most recent norms study was conducted in 2025 (NWEA, 2025).

2. Methods

2.1. Data Collection

This linking study is based on data from the Spring 2022 administrations of the MAP Growth and NM-MSSA assessments. NWEA requested that New Mexico districts recruited to participate in the study share their student and score data for the target term. Districts also permitted NWEA to access their students' MAP Growth scores from the NWEA in-house database. Once state score information was available to NWEA, each student's state testing record was matched to their MAP Growth score based on the student's first and last names, date of birth, student ID, and other available identifying information. Only students who took both the MAP Growth and NM-MSSA assessments were included in the study sample.

2.2. Post-Stratification Weighting

Post-stratification weights were applied to the calculations to ensure that the linking study sample represented the state's test-taking student population in terms of race, sex, and performance level. These variables were selected because they are known to be correlated with students' academic achievement and are often available in state summative assessment reports. The weighted sample will match the target population as closely as possible for the key demographics and performance characteristics as defined by the state.

A raking procedure was used to calculate the post-stratification weights that either compensate for the underrepresentation of certain groups or attenuate the overrepresentation of certain groups. Raking uses iterative procedures to obtain weights that match sample marginal distributions to known population margins. The following steps were taken during this process:

1. Calculate marginal distributions of race, sex, and performance level for the sample and population.
2. Calculate post-stratification weights with the rake function from the survey package in R (Lumley, 2019).
3. Apply the weights to the sample before conducting the linking study analyses.

2.3. Descriptive Statistics

Descriptive statistics are provided to summarize the test scores for both the MAP Growth and NM-MSSA assessments, including the test score mean, standard deviation (SD), minimum, and maximum. The mean presents the average test scores across all students in the study sample, and the SD indicates the variability of test scores, revealing how students' scores are distributed around the average score, or mean. Correlation coefficients between the MAP Growth RIT scores and NM-MSSA scores are also provided to answer the question "How well do the test scores from MAP Growth (that reference the RIT scale) correlate to the scores obtained from the NM-MSSA tests (that reference some other scale) in the same subject?" The correlations were calculated as:

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

where r is the correlation coefficient, x_i and y_i are the values of the *x*- and *y*-variables in a sample, and $\bar{x}$ and $\bar{y}$ are the mean of the values of the *x*- and *y*-variables.

2.4. MAP Growth Cut Scores

MAP Growth cut scores that predict student achievement on the NM-MSSA assessment are reported for grades 3–8, as well as for grade 2 so that educators can track early learners' progress toward proficiency on the NM-MSSA tests by grade 3. Percentile ranks based on the 2025 NWEA norms are also provided. These are useful for understanding how students' scores compare with peers nationwide and the relative rigor of a state's performance level designations for its summative assessment.

The equipercentile linking method was used to identify the spring MAP Growth RIT scores for grades 3–8 that correspond to the spring NM-MSSA performance level cut scores. The equipercentile linking procedure matches scores on the two scales that have the same percentile rank (i.e., the proportion of tests at or below each score). For example, let x represent a score on Test X (e.g., NM-MSSA). Its equipercentile equivalent score on Test Y (e.g., MAP Growth), $e_y(x)$, can be obtained through a cumulative-distribution-based linking function defined as:

$$e_y(x) = G^{-1}[P(x)]$$

where $e_y(x)$ is the equipercentile equivalent of score x on the NM-MSSA tests on the scale of MAP Growth, $P(x)$ is the percentile rank of a given score on the NM-MSSA tests and G^{-1} is the inverse of the percentile rank function for MAP Growth that indicates the score on MAP Growth corresponding to a given percentile. Polynomial loglinear pre-smoothing was applied to reduce irregularities of the score distributions and equipercentile linking curve.

The MAP Growth conditional growth norms provide students' expected score gains across terms, such as growth from fall to spring within the same grade or from spring of a lower grade to spring of the adjacent higher grade. This information was used to calculate the fall and winter cut scores for grades 3–8. The equation below was used to determine the previous term's MAP Growth score needed to reach the spring cut score, considering the expected growth associated with the previous RIT score:

$$RIT_{PredSpring} = RIT_{previous} + g$$

where:
- $RIT_{PredSpring}$ is the predicted MAP Growth spring score,
- $RIT_{previous}$ is the previous term's RIT score, and
- g is the expected growth from the previous RIT (e.g., fall or winter) to the spring RIT score.

The most recent MAP Growth conditional growth norms were also used to calculate the fall, winter, and spring cuts for grade 2. Students do not begin taking the NM-MSSA summative assessment until grade 3. Thus, to derive the spring cut scores for grade 2, the growth score from spring of one year to the next was used (i.e., the growth score from spring of grade 2 to spring of grade 3). The calculation of fall and winter cuts for grade 2 followed the same process as for the other grades. For example, the growth score from fall to spring in grade 2 was used to calculate the fall cuts for this grade.

2.5. Classification Accuracy

The degree to which MAP Growth predicts student proficiency status on the NM-MSSA tests can be described using classification accuracy statistics based on the MAP Growth spring RIT cut scores. The results show the proportion of students correctly classified by their RIT scores as proficient (*Proficient* or higher) or not proficient (lower than *Proficient*) on the NM-MSSA tests. Table 2.1 describes the classification accuracy statistics provided in this report (Pommerich et al., 2004).

Table 2.1. Description of Classification Accuracy Summary Statistics

Statistic	Description	Interpretation
Overall Classification Accuracy Rate	(TP + TN) / (total sample size)	Proportion of the study sample whose proficiency classification on the state test was correctly predicted by MAP Growth cut scores
False Negative (FN) Rate	FN / (FN + TP)	Proportion of students identified by MAP Growth as not proficient in those observed as proficient on the state test
False Positive (FP) Rate	FP / (FP + TN)	Proportion of students identified by MAP Growth as not proficient in those observed as not proficient on the state test
Sensitivity	TP / (TP + FN)	Proportion of students identified by MAP Growth as proficient in those observed as such on the state test
Specificity	TN / (TN + FP)	Proportion of students identified by MAP Growth as not proficient in those observed as such on the state test
Precision	TP / (TP + FP)	Proportion of students observed as proficient on the state test in those identified as such by the MAP Growth test
Area Under the Curve (AUC)	Area under the receiver operating characteristics (ROC) curve	How well MAP Growth cut scores separate the study sample into proficiency categories that match those from the state test cut scores. An AUC at or above 0.80 is considered "good" accuracy.

Note. FP = false positives; FN = false negatives; TP = true positives; TN = true negatives.

2.6. Proficiency Projections

Given that all test scores contain measurement errors, reaching the *Proficient* RIT cut does not guarantee that the student is proficient on the state test. Instead, it can be claimed that a student meeting the RIT cut score has a 50% chance of reaching proficiency (*Proficient* or higher) on the state test, with their chances increasing the greater their score is from the cut. The proficiency projections indicate these probabilities for various RIT scores throughout the year.

In addition to calculating the MAP Growth fall and winter cut scores (and the projected grade 2 cut scores), the MAP Growth conditional growth norms data were also used to calculate the probability of reaching proficiency on the NM-MSSA tests in the spring based on a student's RIT scores from fall and winter:

$$Pr(Achieving\ proficiency\ in\ spring|\ starting\ RIT) = \Phi\left(\frac{RIT_{previous} + g - RIT_{SpringCut}}{SD}\right)$$

where:
- Φ is the standard normal cumulative distribution function,
- $RIT_{previous}$ is the student's RIT score in fall or winter,
- g is the expected growth from the previous fall or winter RIT to the spring RIT,
- $RIT_{SpringCut}$ is the MAP Growth *Proficient* cut score for spring, and
- SD is the conditional standard deviation of the expected growth, g.

The equation below was used to estimate the probability of a student achieving proficiency performance on the NM-MSSA test based on their spring RIT score (RIT_{Spring}):

$$Pr(Achieving\ proficiency\ in\ spring \mid spring\ RIT) = \Phi\left(\frac{RIT_{Spring} - RIT_{SpringCut}}{SE}\right)$$

where SE is the standard error of measurement for MAP Growth.

3. Results

3.1. Study Sample

Only students who have scores on both the MAP Growth and NM-MSSA assessments in Spring 2022 for the target subjects were included in the sample. Data were collected from 13 districts and 33 schools in New Mexico. Table 3.1 presents the distributions of students by race, sex, and performance level in the original unweighted study sample. Table 3.2 presents the distributions of the target population of students who took the NM-MSSA tests. Since the original study sample is different from the target NM-MSSA population, post-stratification weights were applied. Table 3.3 presents the demographic distributions of the sample after weighting, which are almost identical to the NM-MSSA student population distributions.

Table 3.1. Linking Study Sample Demographics (Unweighted)

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
Mathematics							
	Total N	1,503	1,579	1,627	1,762	1,847	1,934
Race	American Indian/Alaskan Native	8.3	6.7	7.4	9.1	11.5	12.9
	Asian	3.4	3.9	3.1	3.1	2.5	2.4
	Black	4.1	5.9	5.7	5.2	5.9	4.9
	Hawaiian Native/Other Pacific Islander	0.7	0.7	0.6	0.9	0.8	1.0
	Multi-Race	0.3	0.4	0.1	0.9	1.0	0.9
	White	83.2	82.3	83.1	80.8	78.3	77.9
Sex	Female	48.6	47.4	48.2	50.0	48.8	50.2
	Male	51.4	52.6	51.8	50.0	51.2	49.8
Performance Level	*Novice*	34.7	40.0	32.0	25.1	32.6	23.5
	Nearing Proficiency	35.3	29.2	25.8	25.4	25.9	43.5
	Proficient	24.3	25.0	27.5	38.0	21.8	28.6
	Advanced	5.8	5.8	14.6	11.5	19.8	4.4
ELA/Reading							
	Total N	1,500	1,575	1,630	1,748	1,838	1,872
Race	American Indian/Alaskan Native	8.2	6.7	7.4	8.9	11.5	13.1
	Asian	3.4	3.9	3.1	3.1	2.6	2.5
	Black	4.1	5.9	5.7	5.0	6.0	5.0
	Hawaiian Native/Other Pacific Islander	0.7	0.7	0.6	0.9	0.8	1.0
	Multi-Race	0.3	0.4	0.1	0.9	1.0	1.0
	White	83.3	82.3	83.1	81.1	78.1	77.4
Sex	Female	48.5	47.2	48.2	50.2	48.7	50.0
	Male	51.5	52.8	51.8	49.8	51.3	50.0
Performance Level	*Novice*	19.4	22.7	26.0	12.1	10.4	21.6
	Nearing Proficiency	40.7	35.4	30.4	43.4	40.9	30.0
	Proficient	19.3	25.0	26.7	28.6	25.4	21.9
	Advanced	20.7	16.9	16.9	16.0	23.3	26.4

Table 3.2. NM-MSSA Student Population Demographics

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
Mathematics							
	Total N	20,872	21,080	21,995	22,145	23,383	23,859
Race	American Indian/Alaskan Native	12.2	11.7	11.5	11.9	11.9	12.1
	Asian	1.8	1.8	1.6	1.5	1.5	1.5
	Black	2.7	2.7	2.8	2.7	2.8	2.6
	Hawaiian Native/Other Pacific Islander	0.4	0.3	0.3	0.4	0.4	0.4
	Multi-Race	2.2	2.2	2.0	1.9	1.8	2.0
	White	80.6	81.3	81.7	81.6	81.6	81.4
Sex	Female	49.4	48.7	49.4	49.1	49.4	48.9
	Male	50.6	51.3	50.6	50.9	50.6	51.1
Performance Level	*Novice*	46.0	48.0	44.0	41.0	49.0	38.0
	Nearing Proficiency	31.0	27.0	25.0	26.0	26.0	42.0
	Proficient	19.0	20.0	21.0	26.0	14.0	17.0
	Advanced	4.0	5.0	10.0	7.0	11.0	2.0
ELA/Reading							
	Total N	20,846	21,058	21,995	22,132	23,381	23,853
Race	American Indian/Alaskan Native	12.2	11.7	11.5	12.0	11.9	12.1
	Asian	1.8	1.8	1.6	1.5	1.5	1.5
	Black	2.7	2.7	2.8	2.6	2.8	2.6
	Hawaiian Native/Other Pacific Islander	0.4	0.3	0.3	0.4	0.4	0.4
	Multi-Race	2.2	2.2	2.1	1.9	1.8	1.9
	White	80.7	81.3	81.7	81.6	81.6	81.4
Sex	Female	49.4	48.7	49.4	49.1	49.5	48.9
	Male	50.6	51.3	50.6	50.9	50.5	51.1
Performance Level	*Novice*	27.0	30.0	34.0	22.0	20.0	33.0
	Nearing Proficiency	41.0	34.0	30.0	45.0	45.0	33.0
	Proficient	16.0	22.0	22.0	20.0	21.0	16.0
	Advanced	16.0	14.0	14.0	13.0	14.0	17.0

Table 3.3. Linking Study Sample Demographics (Weighted)

Demographic Subgroup		% Students by Grade					
		3	**4**	**5**	**6**	**7**	**8**
Mathematics							
	Total N	**1,503**	**1,579**	**1,627**	**1,762**	**1,847**	**1,915**
Race	American Indian/Alaskan Native	12.2	11.7	11.5	11.9	11.9	12.1
	Asian	1.8	1.8	1.6	1.5	1.5	1.5
	Black	2.7	2.7	2.8	2.7	2.8	2.6
	Hawaiian Native/Other Pacific Islander	0.4	0.3	0.3	0.4	0.4	0.4
	Multi-Race	2.2	2.2	2.0	1.9	1.8	2.0
	White	80.6	81.3	81.7	81.6	81.6	81.4
Sex	Female	49.4	48.7	49.4	49.1	49.4	48.9
	Male	50.6	51.3	50.6	50.9	50.6	51.1
Performance Level	*Novice*	46.0	48.0	44.0	41.0	49.0	38.4
	Nearing Proficiency	31.0	27.0	25.0	26.0	26.0	42.4
	Proficient	19.0	20.0	21.0	26.0	14.0	17.2
	Advanced	4.0	5.0	10.0	7.0	11.0	2.0
ELA/Reading							
	Total N	**1,500**	**1,575**	**1,630**	**1,748**	**1,838**	**1,853**
Race	American Indian/Alaskan Native	12.2	11.7	11.5	12.0	11.9	12.1
	Asian	1.8	1.8	1.6	1.5	1.5	1.5
	Black	2.7	2.7	2.8	2.6	2.8	2.6
	Hawaiian Native/Other Pacific Islander	0.4	0.3	0.3	0.4	0.4	0.4
	Multi-Race	2.2	2.2	2.1	1.9	1.8	1.9
	White	80.7	81.3	81.7	81.6	81.6	81.4
Sex	Female	49.4	48.7	49.4	49.1	49.5	48.9
	Male	50.6	51.3	50.6	50.9	50.5	51.1
Performance Level	*Novice*	27.0	30.0	34.0	22.0	20.0	33.3
	Nearing Proficiency	41.0	34.0	30.0	45.0	45.0	33.3
	Proficient	16.0	22.0	22.0	20.0	21.0	16.2
	Advanced	16.0	14.0	14.0	13.0	14.0	17.2

3.2. Descriptive Statistics

Table 3.4 presents descriptive statistics of the MAP Growth and NM-MSSA test scores from Spring 2022, including the correlation coefficients (r) between them. The correlations between the scores range from 0.75 to 0.82 for mathematics and 0.76 to 0.86 for ELA/reading. These values indicate a high positive correlation among the scores, which is important validity evidence for the claim that MAP Growth scores are good predictors of performance on the NM-MSSA assessment.

Table 3.4. Descriptive Statistics of Test Scores

Grade	N	r	NM-MSSA				MAP Growth			
			Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Mathematics										
3	1,503	0.81	345.2	19.6	300	389	197.3	15.6	145	246
4	1,579	0.82	446.6	20.2	400	489	206.0	16.4	149	247
5	1,627	0.79	549.9	19.5	500	590	212.0	17.2	145	292
6	1,762	0.76	649.4	21.8	600	689	217.5	16.1	170	276
7	1,847	0.76	748.5	18.8	700	789	219.1	17.0	166	279
8	1,915	0.75	845.4	18.1	800	889	224.9	18.2	159	315
ELA/Reading										
3	1,500	0.86	349.1	21.3	300	390	189.3	18.1	144	237
4	1,575	0.84	450.9	21.2	400	490	197.6	17.2	150	243
5	1,630	0.81	551.6	20.4	500	589	204.9	16.0	146	248
6	1,748	0.82	650.7	20.4	600	689	209.8	15.5	168	250
7	1,838	0.79	751.7	21.2	700	790	213.2	15.5	165	263
8	1,853	0.76	850.7	21.4	800	890	217.0	14.6	167	261

Note. SD = standard deviation; Min. = minimum; Max. = maximum.

3.3. MAP Growth Cut Scores

Table 3.5 and Table 3.6 present the NM-MSSA scale score ranges and the corresponding MAP Growth RIT cut scores and percentile ranges by content area and grade. Bold numbers highlight the cut scores considered to be at least proficient for accountability purposes. These tables can be used to predict a student's likely performance level on the NM-MSSA spring assessment when MAP Growth is taken in the fall, winter, or spring. For example, a grade 3 student who obtained a MAP Growth mathematics RIT score of 196 in the fall is likely to achieve *Proficient* performance on the NM-MSSA mathematics test. The same is true for a grade 3 student who obtained a MAP Growth mathematics RIT score of 205 in the winter. The winter cut score is higher than the fall cut score because of expected growth during the school year as students receive more instruction.

Within this report, the cut scores for fall and winter are derived from the spring cuts and the typical growth scores from fall-to-spring or winter-to-spring. The typical growth scores are based on the default instructional weeks most encountered for each term (Weeks 4, 20, and 32 for fall, winter, and spring, respectively). Since instructional weeks often vary by district, the cut scores in this report may differ slightly from the MAP Growth score reports that reflect instructional weeks set by partners. If the actual instructional weeks deviate substantially from the default ones, a student's expected performance level could be different from the projections presented in this report. Partners are therefore encouraged to use the projected performance level in students' score reports since they reflect the specific instructional weeks set by partners.

Table 3.5. MAP Growth Cut Scores—Mathematics

	NM-MSSA Mathematics			
Grade	*Novice*	*Nearing Proficiency*	*Proficient*	*Advanced*
3	300–340	341–359	**360**–376	377–390
4	400–443	444–459	**460**–479	480–490
5	500–547	548–559	**560**–572	573–590
6	600–645	646–659	**660**–678	679–690
7	700–747	748–759	**760**–769	770–790
8	800–840	841–859	**860**–877	878–890

	MAP Growth Mathematics							
Grade	*Novice*		*Nearing Proficiency*		*Proficient*		*Advanced*	
	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile
Fall								
2	100–167	1–37	168–186	38–81	**187**–207	82–98	208–350	99–99
3	100–180	1–41	181–195	42–77	**196**–212	78–96	213–350	97–99
4	100–194	1–44	195–207	45–74	**208**–225	75–96	226–350	97–99
5	100–199	1–34	200–211	35–63	**212**–229	64–92	230–350	93–99
6	100–205	1–39	206–215	40–63	**216**–235	64–94	236–350	95–99
7	100–211	1–37	212–222	38–62	**223**–240	63–91	241–350	92–99
8	100–215	1–36	216–235	37–77	**236**–259	78–97	260–350	98–99
Winter								
2	100–175	1–36	176–194	37–80	**195**–215	81–98	216–350	99–99
3	100–188	1–40	189–204	41–77	**205**–221	78–95	222–350	96–99
4	100–201	1–43	202–215	44–74	**216**–233	75–95	234–350	96–99
5	100–205	1–36	206–217	37–63	**218**–235	64–91	236–350	92–99
6	100–211	1–40	212–221	41–63	**222**–242	64–93	243–350	94–99
7	100–215	1–38	216–226	39–62	**227**–245	63–90	246–350	91–99
8	100–219	1–37	220–240	38–77	**241**–265	78–97	266–350	98–99
Spring								
2	100–182	1–38	183–199	39–77	**200**–218	78–97	219–350	98–99
3	100–195	1–42	196–210	43–75	**211**–226	76–94	227–350	95–99
4	100–207	1–44	208–220	45–72	**221**–238	73–94	239–350	95–99
5	100–209	1–36	210–221	37–62	**222**–239	63–89	240–350	90–99
6	100–215	1–40	216–225	41–61	**226**–246	62–92	247–350	93–99
7	100–218	1–39	219–229	40–62	**230**–247	63–88	248–350	89–99
8	100–222	1–38	223–242	39–75	**243**–266	76–96	267–350	97–99

Note. Bold numbers indicate the cut scores considered to be at least proficient for accountability purposes.

Table 3.6. MAP Growth Cut Scores—ELA/Reading

NM-MSSA ELA				
Grade	*Novice*	*Nearing Proficiency*	*Proficient*	*Advanced*
3	300–335	336–359	**360**–369	370–390
4	400–439	440–459	**460**–472	473–490
5	500–542	543–559	**560**–572	573–590
6	600–631	632–659	**660**–672	673–690
7	700–730	731–759	**760**–774	775–790
8	800–839	840–859	**860**–870	871–890

MAP Growth Reading								
Grade	*Novice*		*Nearing Proficiency*		*Proficient*		*Advanced*	
	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile
Fall								
2	100–146	1–8	147–174	9–60	**175**–186	61–83	187–350	84–99
3	100–165	1–14	166–188	15–58	**189**–198	59–77	199–350	78–99
4	100–180	1–19	181–197	20–54	**198**–210	55–79	211–350	80–99
5	100–193	1–28	194–206	29–57	**207**–216	58–77	217–350	78–99
6	100–195	1–21	196–214	22–63	**215**–223	64–80	224–350	81–99
7	100–197	1–19	198–215	20–58	**216**–226	59–80	227–350	81–99
8	100–207	1–32	208–220	33–61	**221**–227	62–75	228–350	76–99
Winter								
2	100–153	1–8	154–181	9–61	**182**–192	62–82	193–350	83–99
3	100–171	1–15	172–194	16–60	**195**–203	61–77	204–350	78–99
4	100–184	1–20	185–201	21–55	**202**–213	56–78	214–350	79–99
5	100–196	1–28	197–208	29–55	**209**–218	56–76	219–350	77–99
6	100–197	1–21	198–215	22–61	**216**–224	62–79	225–350	80–99
7	100–198	1–18	199–216	19–57	**217**–227	58–79	228–350	80–99
8	100–208	1–31	209–221	32–61	**222**–228	62–75	229–350	76–99
Spring								
2	100–161	1–12	162–185	13–59	**186**–195	60–79	196–350	80–99
3	100–177	1–18	178–197	19–58	**198**–205	59–74	206–350	75–99
4	100–188	1–22	189–203	23–53	**204**–214	54–76	215–350	77–99
5	100–199	1–30	200–210	31–55	**211**–219	56–74	220–350	75–99
6	100–200	1–24	201–216	25–61	**217**–225	62–79	226–350	80–99
7	100–201	1–22	202–217	23–56	**218**–228	57–79	229–350	80–99
8	100–210	1–34	211–222	35–61	**223**–229	62–75	230–350	76–99

Note. Bold numbers indicate the cut scores considered to be at least proficient for accountability purposes.

3.4. Classification Accuracy

Table 3.7 presents the classification accuracy summary statistics, including the overall classification accuracy rates. These results indicate how well MAP Growth spring RIT scores predict proficiency on the NM-MSSA tests, providing insight into the predictive validity of MAP Growth. The overall classification accuracy rates range from 0.85 to 0.88 for mathematics and 0.82 to 0.87 for ELA/reading. These values suggest that the RIT cut scores are effective at classifying students as proficient (*Proficient* or higher) or not proficient (lower than *Proficient*) on the NM-MSSA assessment.

Although the results show that MAP Growth scores can be used to predict student proficiency with relatively high accuracy on the NM-MSSA tests, there is a notable limitation to how these results should be used and interpreted. The NM-MSSA and MAP Growth assessments are designed for different purposes and measure slightly different constructs even within the same content area. Therefore, scores on these tests cannot be assumed to be interchangeable. MAP Growth may not be used as a substitute for the state tests and vice versa.

Table 3.7. Classification Accuracy Results

Grade	N	Cut Score		Class. Accuracy	Rate		Sensitivity	Specificity	Precision	AUC
		MAP Growth	NM-MSSA		FP	FN				
Mathematics										
3	1,503	208	360	0.88	0.10	0.19	0.81	0.90	0.70	0.95
4	1,579	216	460	0.88	0.10	0.16	0.84	0.90	0.74	0.95
5	1,627	219	560	0.86	0.14	0.15	0.85	0.86	0.73	0.93
6	1,762	223	660	0.85	0.14	0.17	0.83	0.86	0.75	0.93
7	1,847	228	760	0.88	0.12	0.15	0.85	0.88	0.71	0.94
8	1,915	239	860	0.88	0.10	0.22	0.78	0.90	0.65	0.93
ELA/Reading										
3	1,500	198	360	0.87	0.13	0.13	0.87	0.87	0.76	0.95
4	1,575	204	460	0.85	0.14	0.18	0.82	0.86	0.77	0.93
5	1,630	211	560	0.86	0.13	0.17	0.83	0.87	0.78	0.93
6	1,748	217	660	0.84	0.14	0.20	0.80	0.86	0.74	0.91
7	1,838	218	760	0.82	0.20	0.14	0.86	0.80	0.70	0.92
8	1,853	223	860	0.82	0.16	0.21	0.79	0.84	0.71	0.90

Note. Class. Accuracy = overall classification accuracy rate; FP = false positives; FN = false negatives; AUC = area under the ROC curve.

3.5. Proficiency Projections

Table 3.8 and Table 3.9 present the estimated probability of achieving proficiency (*Proficient* or higher) performance on the NM-MSSA tests based on RIT scores from fall, winter, or spring. Due to measurement error in all test scores, the *Proficient* MAP Growth cuts do not guarantee that a student will reach proficiency on the NM-MSSA. Instead, they indicate a 50% chance that a student will reach a particular performance level. Therefore, these projections further elucidate the *Proficient* cut scores by providing the likelihood of reaching proficiency on the NM-MSSA in the spring at a given percentile throughout the year.

For example, the spring grade 3 *Proficient* RIT cut score for mathematics is 211, which indicates a 50% chance of achieving proficiency in the spring, as shown in Table 3.8. An educator can also use the table to estimate that a grade 3 student who obtained a MAP Growth mathematics score of 195 in the fall has a 45% probability of reaching proficiency on the NM-MSSA test in the spring.

Table 3.8. Proficiency Projections Based on RIT Scores—Mathematics

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Proficient	Fall Prob.	Winter RIT	Winter Projected Proficiency Proficient	Winter Prob.	Spring RIT	Spring Projected Proficiency Proficient	Spring Prob.
2	5	200	147	No	<0.01	155	No	<0.01	161	No	<0.01
	10	200	153	No	<0.01	161	No	<0.01	167	No	<0.01
	15	200	157	No	<0.01	165	No	<0.01	171	No	<0.01
	20	200	160	No	<0.01	168	No	<0.01	174	No	<0.01
	25	200	162	No	<0.01	171	No	<0.01	177	No	<0.01
	30	200	165	No	0.01	173	No	<0.01	179	No	<0.01
	35	200	167	No	0.01	175	No	0.01	181	No	<0.01
	40	200	169	No	0.03	177	No	0.02	183	No	<0.01
	45	200	171	No	0.04	179	No	0.02	185	No	<0.01
	50	200	173	No	0.07	181	No	0.04	187	No	<0.01
	55	200	175	No	0.09	183	No	0.07	189	No	<0.01
	60	200	177	No	0.14	185	No	0.12	192	No	0.01
	65	200	179	No	0.2	187	No	0.18	194	No	0.04
	70	200	181	No	0.27	189	No	0.21	196	No	0.13
	75	200	183	No	0.36	192	No	0.35	198	No	0.28
	80	200	186	No	0.45	194	No	0.45	201	Yes	0.61
	85	200	189	Yes	0.6	197	Yes	0.6	204	Yes	0.87
	90	200	193	Yes	0.73	201	Yes	0.75	208	Yes	0.99
	95	200	198	Yes	0.89	207	Yes	0.93	214	Yes	>0.99
3	5	211	158	No	<0.01	166	No	<0.01	171	No	<0.01
	10	211	164	No	<0.01	172	No	<0.01	177	No	<0.01
	15	211	168	No	<0.01	176	No	<0.01	181	No	<0.01
	20	211	171	No	<0.01	179	No	<0.01	185	No	<0.01
	25	211	174	No	<0.01	182	No	<0.01	188	No	<0.01
	30	211	176	No	0.01	184	No	<0.01	190	No	<0.01
	35	211	178	No	0.01	186	No	0.01	193	No	<0.01
	40	211	180	No	0.02	189	No	0.02	195	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
				Fall			**Winter**			**Spring**	
			Fall RIT	**Projected Proficiency**		**Winter RIT**	**Projected Proficiency**		**Spring RIT**	**Projected Proficiency**	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	45	211	182	No	0.04	191	No	0.04	197	No	<0.01
	50	211	184	No	0.06	193	No	0.05	199	No	<0.01
	55	211	186	No	0.1	195	No	0.08	201	No	<0.01
	60	211	188	No	0.15	197	No	0.13	203	No	0.01
	65	211	190	No	0.22	199	No	0.2	206	No	0.08
	70	211	192	No	0.3	201	No	0.29	208	No	0.2
	75	211	195	No	0.45	204	No	0.45	211	Yes	0.5
	80	211	197	Yes	0.55	206	Yes	0.55	213	Yes	0.72
	85	211	200	Yes	0.7	210	Yes	0.71	217	Yes	0.96
	90	211	204	Yes	0.85	214	Yes	0.87	221	Yes	>0.99
	95	211	210	Yes	0.95	220	Yes	0.97	227	Yes	>0.99
4	5	221	171	No	<0.01	176	No	<0.01	180	No	<0.01
	10	221	177	No	<0.01	183	No	<0.01	187	No	<0.01
	15	221	181	No	<0.01	187	No	<0.01	191	No	<0.01
	20	221	184	No	<0.01	190	No	<0.01	195	No	<0.01
	25	221	186	No	<0.01	193	No	<0.01	198	No	<0.01
	30	221	189	No	0.01	196	No	<0.01	201	No	<0.01
	35	221	191	No	0.02	198	No	0.01	203	No	<0.01
	40	221	193	No	0.03	200	No	0.02	206	No	<0.01
	45	221	195	No	0.05	202	No	0.03	208	No	<0.01
	50	221	197	No	0.09	204	No	0.06	210	No	<0.01
	55	221	199	No	0.13	207	No	0.13	212	No	0.01
	60	221	201	No	0.19	209	No	0.16	215	No	0.04
	65	221	203	No	0.27	211	No	0.24	217	No	0.13
	70	221	205	No	0.35	213	No	0.33	220	No	0.39
	75	221	208	Yes	0.5	216	Yes	0.5	222	Yes	0.61
	80	221	210	Yes	0.6	219	Yes	0.67	225	Yes	0.87
	85	221	214	Yes	0.77	222	Yes	0.8	229	Yes	0.99

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Proficient	Fall Projected Proficiency Prob.	Winter RIT	Winter Projected Proficiency Proficient	Winter Projected Proficiency Prob.	Spring RIT	Spring Projected Proficiency Proficient	Spring Projected Proficiency Prob.
	90	221	217	Yes	0.87	226	Yes	0.92	233	Yes	>0.99
	95	221	223	Yes	0.97	232	Yes	0.99	240	Yes	>0.99
5	5	222	180	No	<0.01	183	No	<0.01	186	No	<0.01
	10	222	185	No	<0.01	189	No	<0.01	192	No	<0.01
	15	222	189	No	<0.01	194	No	<0.01	197	No	<0.01
	20	222	193	No	0.01	197	No	<0.01	200	No	<0.01
	25	222	195	No	0.01	200	No	0.01	204	No	<0.01
	30	222	198	No	0.04	203	No	0.02	206	No	<0.01
	35	222	200	No	0.06	205	No	0.03	209	No	<0.01
	40	222	202	No	0.1	207	No	0.06	211	No	<0.01
	45	222	204	No	0.15	210	No	0.13	214	No	0.01
	50	222	206	No	0.22	212	No	0.2	216	No	0.04
	55	222	208	No	0.3	214	No	0.28	218	No	0.13
	60	222	210	No	0.4	216	No	0.39	221	No	0.39
	65	222	212	Yes	0.5	219	Yes	0.56	223	Yes	0.61
	70	222	215	Yes	0.65	221	Yes	0.67	226	Yes	0.87
	75	222	217	Yes	0.74	224	Yes	0.8	228	Yes	0.96
	80	222	220	Yes	0.85	226	Yes	0.87	232	Yes	>0.99
	85	222	223	Yes	0.92	230	Yes	0.96	235	Yes	>0.99
	90	222	227	Yes	0.97	234	Yes	0.99	240	Yes	>0.99
	95	222	233	Yes	>0.99	240	Yes	>0.99	246	Yes	>0.99
6	5	226	184	No	<0.01	187	No	<0.01	190	No	<0.01
	10	226	190	No	<0.01	194	No	<0.01	197	No	<0.01
	15	226	194	No	<0.01	198	No	<0.01	201	No	<0.01
	20	226	197	No	0.01	201	No	<0.01	205	No	<0.01
	25	226	199	No	0.02	204	No	0.01	208	No	<0.01
	30	226	202	No	0.04	207	No	0.03	211	No	<0.01
	35	226	204	No	0.07	209	No	0.04	213	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
				Fall			**Winter**			**Spring**	
			Fall RIT	**Projected Proficiency**		Winter RIT	**Projected Proficiency**		Spring RIT	**Projected Proficiency**	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	40	226	206	No	0.11	212	No	0.09	216	No	<0.01
	45	226	208	No	0.16	214	No	0.14	218	No	0.01
	50	226	210	No	0.23	216	No	0.21	220	No	0.04
	55	226	212	No	0.31	218	No	0.29	223	No	0.2
	60	226	214	No	0.4	220	No	0.39	225	No	0.39
	65	226	216	Yes	0.5	223	Yes	0.55	227	Yes	0.61
	70	226	219	Yes	0.64	225	Yes	0.66	230	Yes	0.87
	75	226	221	Yes	0.77	228	Yes	0.79	233	Yes	0.98
	80	226	224	Yes	0.87	231	Yes	0.89	236	Yes	>0.99
	85	226	227	Yes	0.93	234	Yes	0.95	239	Yes	>0.99
	90	226	231	Yes	0.98	238	Yes	0.99	244	Yes	>0.99
	95	226	237	Yes	>0.99	245	Yes	>0.99	251	Yes	>0.99
7	5	230	189	No	<0.01	191	No	<0.01	192	No	<0.01
	10	230	195	No	<0.01	197	No	<0.01	199	No	<0.01
	15	230	199	No	<0.01	202	No	<0.01	204	No	<0.01
	20	230	203	No	0.01	206	No	<0.01	208	No	<0.01
	25	230	206	No	0.02	209	No	0.01	211	No	<0.01
	30	230	208	No	0.03	211	No	0.02	214	No	<0.01
	35	230	211	No	0.07	214	No	0.04	216	No	<0.01
	40	230	213	No	0.11	216	No	0.07	219	No	<0.01
	45	230	215	No	0.17	219	No	0.15	221	No	0.01
	50	230	217	No	0.23	221	No	0.22	224	No	0.04
	55	230	219	No	0.31	223	No	0.3	226	No	0.13
	60	230	222	No	0.45	226	No	0.45	229	No	0.39
	65	230	224	Yes	0.55	228	Yes	0.55	231	Yes	0.61
	70	230	226	Yes	0.64	231	Yes	0.65	234	Yes	0.87
	75	230	229	Yes	0.77	233	Yes	0.74	237	Yes	0.98
	80	230	232	Yes	0.86	236	Yes	0.85	240	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	85	230	235	Yes	0.93	240	Yes	0.94	244	Yes	>0.99
	90	230	239	Yes	0.97	245	Yes	0.99	249	Yes	>0.99
	95	230	246	Yes	>0.99	251	Yes	>0.99	256	Yes	>0.99
8	5	243	192	No	<0.01	194	No	<0.01	196	No	<0.01
	10	243	199	No	<0.01	201	No	<0.01	203	No	<0.01
	15	243	203	No	<0.01	206	No	<0.01	208	No	<0.01
	20	243	207	No	<0.01	210	No	<0.01	212	No	<0.01
	25	243	210	No	<0.01	213	No	<0.01	215	No	<0.01
	30	243	212	No	<0.01	216	No	<0.01	218	No	<0.01
	35	243	215	No	0.01	219	No	<0.01	221	No	<0.01
	40	243	217	No	0.01	221	No	0.01	224	No	<0.01
	45	243	220	No	0.03	224	No	0.02	226	No	<0.01
	50	243	222	No	0.05	226	No	0.04	229	No	<0.01
	55	243	224	No	0.08	228	No	0.07	231	No	<0.01
	60	243	227	No	0.15	231	No	0.13	234	No	0.01
	65	243	229	No	0.21	233	No	0.19	237	No	0.04
	70	243	232	No	0.32	236	No	0.31	239	No	0.13
	75	243	234	No	0.41	239	No	0.4	242	No	0.39
	80	243	237	Yes	0.55	242	Yes	0.55	246	Yes	0.8
	85	243	241	Yes	0.72	246	Yes	0.74	250	Yes	0.98
	90	243	246	Yes	0.87	251	Yes	0.9	255	Yes	>0.99
	95	243	252	Yes	0.97	258	Yes	0.98	262	Yes	>0.99

Note. Prob. = Probability.

Table 3.9. Proficiency Projections Based on RIT Scores—ELA/Reading

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Proficient	Fall Projected Proficiency Prob.	Winter RIT	Winter Projected Proficiency Proficient	Winter Projected Proficiency Prob.	Spring RIT	Spring Projected Proficiency Proficient	Spring Projected Proficiency Prob.
2	5	186	142	No	<0.01	149	No	<0.01	153	No	<0.01
	10	186	148	No	0.01	155	No	<0.01	159	No	<0.01
	15	186	152	No	0.01	159	No	0.01	164	No	<0.01
	20	186	156	No	0.04	162	No	0.02	167	No	<0.01
	25	186	159	No	0.06	165	No	0.04	170	No	<0.01
	30	186	161	No	0.09	168	No	0.07	173	No	<0.01
	35	186	163	No	0.13	170	No	0.11	175	No	<0.01
	40	186	166	No	0.19	172	No	0.17	177	No	0.01
	45	186	168	No	0.25	175	No	0.24	180	No	0.04
	50	186	170	No	0.33	177	No	0.32	182	No	0.13
	55	186	172	No	0.37	179	No	0.41	184	No	0.28
	60	186	174	No	0.46	181	No	0.45	186	Yes	0.5
	65	186	177	Yes	0.59	183	Yes	0.55	188	Yes	0.72
	70	186	179	Yes	0.63	186	Yes	0.68	191	Yes	0.92
	75	186	182	Yes	0.75	188	Yes	0.76	193	Yes	0.98
	80	186	184	Yes	0.81	191	Yes	0.83	196	Yes	>0.99
	85	186	188	Yes	0.89	194	Yes	0.91	200	Yes	>0.99
	90	186	192	Yes	0.95	199	Yes	0.96	204	Yes	>0.99
	95	186	198	Yes	0.99	205	Yes	0.99	210	Yes	>0.99
3	5	198	155	No	<0.01	160	No	<0.01	164	No	<0.01
	10	198	161	No	<0.01	167	No	<0.01	171	No	<0.01
	15	198	166	No	0.01	171	No	0.01	175	No	<0.01
	20	198	169	No	0.02	175	No	0.02	179	No	<0.01
	25	198	172	No	0.05	178	No	0.04	182	No	<0.01
	30	198	175	No	0.07	180	No	0.06	184	No	<0.01
	35	198	178	No	0.13	183	No	0.12	187	No	<0.01
	40	198	180	No	0.18	185	No	0.14	189	No	0.01

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Proficient	Fall Projected Proficiency Prob.	Winter RIT	Winter Projected Proficiency Proficient	Winter Projected Proficiency Prob.	Spring RIT	Spring Projected Proficiency Proficient	Spring Projected Proficiency Prob.
	45	198	182	No	0.22	188	No	0.24	192	No	0.04
	50	198	185	No	0.33	190	No	0.32	194	No	0.13
	55	198	187	No	0.41	192	No	0.41	196	No	0.28
	60	198	189	Yes	0.5	194	No	0.45	198	Yes	0.5
	65	198	192	Yes	0.59	197	Yes	0.59	201	Yes	0.8
	70	198	194	Yes	0.67	199	Yes	0.68	203	Yes	0.92
	75	198	197	Yes	0.75	202	Yes	0.8	206	Yes	0.99
	80	198	200	Yes	0.84	205	Yes	0.86	209	Yes	>0.99
	85	198	204	Yes	0.91	209	Yes	0.94	213	Yes	>0.99
	90	198	208	Yes	0.96	213	Yes	0.97	217	Yes	>0.99
	95	198	215	Yes	0.99	220	Yes	>0.99	224	Yes	>0.99
	5	204	166	No	<0.01	170	No	<0.01	173	No	<0.01
	10	204	173	No	<0.01	177	No	<0.01	179	No	<0.01
	15	204	177	No	0.02	181	No	0.01	184	No	<0.01
	20	204	181	No	0.04	184	No	0.02	187	No	<0.01
	25	204	184	No	0.08	187	No	0.05	190	No	<0.01
	30	204	186	No	0.1	190	No	0.1	193	No	<0.01
	35	204	189	No	0.17	193	No	0.16	195	No	0.01
	40	204	191	No	0.24	195	No	0.23	198	No	0.04
4	45	204	194	No	0.32	197	No	0.31	200	No	0.13
	50	204	196	No	0.41	199	No	0.4	202	No	0.28
	55	204	198	Yes	0.5	202	Yes	0.5	204	Yes	0.5
	60	204	200	Yes	0.59	204	Yes	0.6	207	Yes	0.8
	65	204	203	Yes	0.68	206	Yes	0.69	209	Yes	0.92
	70	204	205	Yes	0.76	209	Yes	0.81	211	Yes	0.98
	75	204	208	Yes	0.86	211	Yes	0.84	214	Yes	>0.99
	80	204	211	Yes	0.9	214	Yes	0.92	217	Yes	>0.99
	85	204	215	Yes	0.96	218	Yes	0.97	220	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Proficient	Fall Projected Proficiency Prob.	Winter RIT	Winter Projected Proficiency Proficient	Winter Projected Proficiency Prob.	Spring RIT	Spring Projected Proficiency Proficient	Spring Projected Proficiency Prob.
	90	204	219	Yes	0.98	222	Yes	0.99	225	Yes	>0.99
	95	204	226	Yes	>0.99	229	Yes	>0.99	231	Yes	>0.99
5	5	211	175	No	<0.01	178	No	<0.01	180	No	<0.01
	10	211	181	No	<0.01	184	No	<0.01	186	No	<0.01
	15	211	186	No	0.01	189	No	0.01	191	No	<0.01
	20	211	189	No	0.03	192	No	0.03	194	No	<0.01
	25	211	192	No	0.06	195	No	0.05	197	No	<0.01
	30	211	195	No	0.11	197	No	0.08	199	No	<0.01
	35	211	197	No	0.16	200	No	0.15	202	No	0.01
	40	211	199	No	0.2	202	No	0.22	204	No	0.02
	45	211	201	No	0.27	204	No	0.26	206	No	0.08
	50	211	204	No	0.4	206	No	0.35	208	No	0.2
	55	211	206	No	0.45	209	Yes	0.5	211	Yes	0.5
	60	211	208	Yes	0.55	211	Yes	0.55	213	Yes	0.72
	65	211	210	Yes	0.64	213	Yes	0.65	215	Yes	0.87
	70	211	213	Yes	0.73	215	Yes	0.74	217	Yes	0.96
	75	211	215	Yes	0.8	218	Yes	0.85	220	Yes	0.99
	80	211	218	Yes	0.89	221	Yes	0.92	223	Yes	>0.99
	85	211	222	Yes	0.94	224	Yes	0.96	226	Yes	>0.99
	90	211	226	Yes	0.98	228	Yes	0.99	230	Yes	>0.99
	95	211	232	Yes	>0.99	235	Yes	>0.99	237	Yes	>0.99
6	5	217	181	No	<0.01	183	No	<0.01	185	No	<0.01
	10	217	187	No	<0.01	189	No	<0.01	191	No	<0.01
	15	217	191	No	0.01	193	No	<0.01	195	No	<0.01
	20	217	195	No	0.02	197	No	0.02	198	No	<0.01
	25	217	198	No	0.04	199	No	0.03	201	No	<0.01
	30	217	200	No	0.06	202	No	0.05	203	No	<0.01
	35	217	202	No	0.09	204	No	0.08	206	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		Proficient	Prob.		Proficient	Prob.
	40	217	205	No	0.16	206	No	0.13	208	No	0.01
	45	217	207	No	0.2	209	No	0.22	210	No	0.02
	50	217	209	No	0.27	211	No	0.26	212	No	0.08
	55	217	211	No	0.36	213	No	0.35	214	No	0.2
	60	217	213	No	0.45	215	No	0.45	216	No	0.39
	65	217	215	Yes	0.5	217	Yes	0.55	218	Yes	0.61
	70	217	218	Yes	0.64	219	Yes	0.65	221	Yes	0.87
	75	217	220	Yes	0.73	222	Yes	0.78	223	Yes	0.96
	80	217	223	Yes	0.84	225	Yes	0.87	226	Yes	0.99
	85	217	226	Yes	0.91	228	Yes	0.94	229	Yes	>0.99
	90	217	231	Yes	0.97	232	Yes	0.98	233	Yes	>0.99
	95	217	237	Yes	>0.99	238	Yes	>0.99	239	Yes	>0.99
7	5	218	185	No	<0.01	186	No	<0.01	187	No	<0.01
	10	218	191	No	0.01	192	No	<0.01	193	No	<0.01
	15	218	195	No	0.02	196	No	0.01	197	No	<0.01
	20	218	198	No	0.03	200	No	0.03	201	No	<0.01
	25	218	201	No	0.06	202	No	0.04	203	No	<0.01
	30	218	204	No	0.12	205	No	0.09	206	No	<0.01
	35	218	206	No	0.15	207	No	0.14	208	No	<0.01
	40	218	208	No	0.21	210	No	0.23	211	No	0.02
	45	218	210	No	0.28	212	No	0.27	213	No	0.08
	50	218	212	No	0.36	214	No	0.36	215	No	0.2
	55	218	214	No	0.41	216	No	0.45	217	No	0.39
	60	218	217	Yes	0.55	218	Yes	0.55	219	Yes	0.61
	65	218	219	Yes	0.64	220	Yes	0.64	221	Yes	0.8
	70	218	221	Yes	0.72	223	Yes	0.77	224	Yes	0.96
	75	218	224	Yes	0.82	225	Yes	0.84	226	Yes	0.99
	80	218	226	Yes	0.88	228	Yes	0.91	229	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	85	218	230	Yes	0.95	231	Yes	0.96	232	Yes	>0.99
	90	218	234	Yes	0.98	235	Yes	0.99	237	Yes	>0.99
	95	218	240	Yes	>0.99	241	Yes	>0.99	243	Yes	>0.99
8	5	223	188	No	<0.01	189	No	<0.01	190	No	<0.01
	10	223	194	No	<0.01	195	No	<0.01	196	No	<0.01
	15	223	198	No	0.01	199	No	0.01	200	No	<0.01
	20	223	201	No	0.02	203	No	0.02	203	No	<0.01
	25	223	204	No	0.04	205	No	0.03	206	No	<0.01
	30	223	207	No	0.07	208	No	0.06	209	No	<0.01
	35	223	209	No	0.11	210	No	0.1	211	No	<0.01
	40	223	211	No	0.15	213	No	0.14	213	No	<0.01
	45	223	214	No	0.21	215	No	0.2	216	No	0.02
	50	223	216	No	0.29	217	No	0.28	218	No	0.08
	55	223	218	No	0.37	219	No	0.36	220	No	0.2
	60	223	220	No	0.45	221	No	0.45	222	No	0.39
	65	223	222	Yes	0.55	223	Yes	0.55	224	Yes	0.61
	70	223	225	Yes	0.67	226	Yes	0.68	227	Yes	0.87
	75	223	227	Yes	0.75	228	Yes	0.76	229	Yes	0.96
	80	223	230	Yes	0.85	231	Yes	0.86	232	Yes	0.99
	85	223	233	Yes	0.91	235	Yes	0.94	236	Yes	>0.99
	90	223	238	Yes	0.97	239	Yes	0.98	240	Yes	>0.99
	95	223	244	Yes	>0.99	245	Yes	>0.99	246	Yes	>0.99

Note. Prob. = Probability.

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