Predicting Proficiency on the State of Texas Assessments of Academic Readiness (STAAR) Spanish Based on NWEA MAP Growth Scores

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NWEA Psychometrics and Analytics

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Linking Study Updates

Date	Description
2022-02-27	Initial study conducted for STAAR Spanish in grades 3–5 reading using Spring 2019 data.
2025-07-01	Updated the linking study for STAAR Spanish in mathematics and RLA in grades 3–5 using Spring 2023 data as well as the 2025 norms for Spanish mathematics and the 2021 norms for Spanish RLA.

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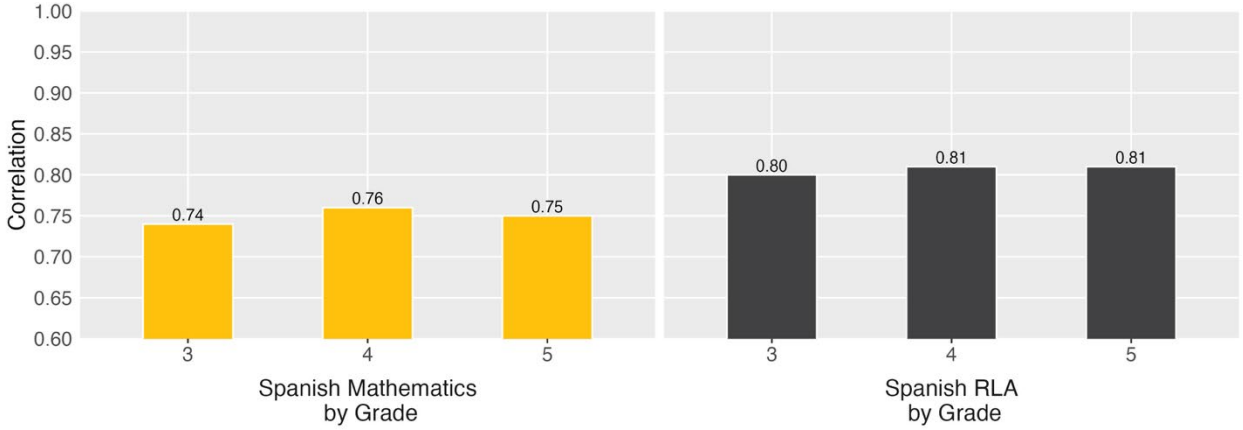
Executive Summary

Linking studies allow partners to use MAP® Growth™ Rasch Unit (RIT) scores throughout the year to predict students' performance levels on state summative assessments. This is accomplished through statistical analyses that produce RIT cut scores that correspond to 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 State of Texas Assessments of Academic Readiness (STAAR) Spanish assessments described in this report provides RIT cut scores for the fall, winter, and spring MAP Growth administrations that correspond to the STAAR Spanish performance levels for mathematics and reading language arts (RLA) in grades 3–5. Educators can use the RIT cut scores to identify students at risk of not meeting state proficiency standards and provide targeted instruction to improve academic outcomes.

The linking study is based on test scores from students in grades 3–5 who took both the MAP Growth and STAAR Spanish assessments in Spring 2023. In total, this study included 10,152 students from 263 schools within 15 districts in Texas.

Prior to initiating the linking study, NWEA's content team confirmed that the content standards used to construct the MAP Growth interim assessment were aligned with those of the STAAR Spanish summative assessments, thus warranting a connection. Further investigation into the relationship between MAP Growth and STAAR Spanish involved calculating correlation coefficients to confirm the alignment between the MAP Growth scores and the summative test scores of STAAR Spanish. A high positive correlation (e.g., ≥ 0.70) shows that students who perform well on one assessment also tend to perform well on the other, and vice versa, with 1.00 being a perfect positive correlation. As shown in Figure E.1, the correlations between the MAP Growth and STAAR Spanish test scores in all subjects and grades are higher than 0.70, indicating that MAP Growth is a good assessment for predicting performance on the STAAR Spanish spring summative assessments.

Figure E.1. Correlations Between MAP Growth and State Summative Assessment 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 grades 3–5 STAAR Spanish summative assessments for every subject and grade. MAP Growth cut scores for grade 2 in mathematics, 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 STAAR

Spanish mathematics test 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 (NWEA, 2021; NWEA, 2025) for the adjacent grades (i.e., grades 2 to 3), or fall and winter administrations to spring administration. While RIT cut scores were generated for every performance level on the STAAR Spanish summative assessments, Table E.1 presents the *Meets Grade Level* cut scores that indicate the minimum score a student must get to be considered proficient.

Table E.1. MAP Growth RIT Cut Scores Linked to STAAR Spanish *Meets Grade Level* Cut Scores

Assessment		*Meets Grade Level* Cut Scores by Grade			
		2	3	4	5
Spanish Mathematics					
STAAR Spanish Spring		–	1471	1557	1634
MAP Growth Mathematics	Fall	186	195	207	211
	Winter	194	204	215	217
	Spring	199	210	220	221
Spanish RLA					
STAAR Spanish Spring		–	1447	1488	1556
MAP Growth Spanish Reading	Fall	–	198	202	206
	Winter	–	202	206	209
	Spring	–	203	207	211

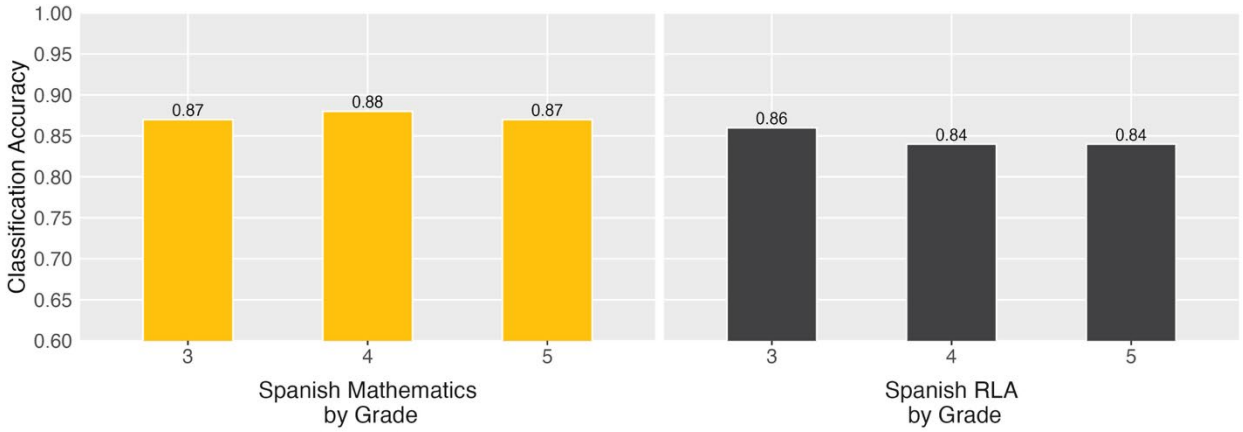
Educators can use these cut scores to determine whether students are on track for proficiency on the state assessments. For example, the *Meets Grade Level* cut score on the grade 3 STAAR Spanish mathematics summative test is 1471. A grade 3 student with a MAP Growth mathematics RIT score of 195 in the fall is likely to meet proficiency on the STAAR Spanish mathematics summative test in the spring, whereas a grade 3 student with a RIT score lower than 195 in the fall is in jeopardy of not meeting proficiency. MAP Growth cut scores for grade 2 mathematics are also provided so that educators can track early learners' progress toward proficiency on the STAAR Spanish spring summative assessment in mathematics by grade 3. The MAP Growth cut scores for grade 2 Spanish RLA are not available because the growth norms from grade 2 spring to grade 3 spring were not provided in the norms study for MAP Growth Spanish RLA.

As further evidence that MAP Growth scores can be used to predict students' proficiency on the state tests, NWEA calculated classification accuracy statistics that show how well the RIT scores correctly classified, or predicted, students as proficient on the STAAR Spanish

[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.

summative tests.[2] For example, the grade 3 MAP Growth mathematics *Meets Grade Level* cut score has a 0.87 accuracy rate, meaning it accurately predicted student performance on the state test for 87% of the sample. A high statistic indicates high accuracy. Overall, MAP Growth scores have a high accuracy rate of identifying student proficiency on the STAAR Spanish summative 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 assessments. 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.

[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 state summative assessments 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 findings from a linking study performed by NWEA aiming to statistically connect the Rasch Unit (RIT) scores obtained from the MAP Growth assessments with the results of the STAAR Spanish spring summative assessments. These assessments cover Spanish mathematics and Spanish reading language arts (RLA) for grades 3–5. The data utilized to generate this report are comprised of the STAAR Spanish test scores collected during Spring 2023. MAP Growth cut scores are also included for grade 2 mathematics so that educators can track early learners' progress toward proficiency on the STAAR Spanish summative test in mathematics by grade 3. Specifically, this report presents the following results:

1. Student 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 STAAR Spanish spring summative assessments
4. Classification accuracy statistics to determine the degree to which MAP Growth accurately predicts student proficiency status on the STAAR Spanish summative tests
5. The probability of achieving grade-level proficiency on the STAAR Spanish summative assessments based on MAP Growth RIT scores from fall, winter, and spring

1.2. Assessment Overview

The STAAR Spanish tests are Texas's state summative assessments aligned to the Texas Essential Knowledge and Skills (TEKS) curriculum and administered to eligible students for whom a Spanish version of STAAR best measures their academic progress. Based on their test scores, students are placed into one of four performance levels: *Did Not Meet Grade Level*, *Approaches Grade Level*, *Meets Grade Level*, and *Masters Grade Level*. The *Meets Grade Level* cut score demarks the minimum level of performance 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. To aid the interpretation of scores, NWEA conducts norming studies of student and school performance on MAP Growth. Growth norms provide expected score gains across test administrations (e.g., the relative evaluation of a student's growth from fall to spring), which are used to conduct the linking studies. The norms study used for Spanish mathematics in this report was conducted in 2025 (NWEA, 2025) and in 2021 for Spanish RLA (NWEA, 2021).

2. Methods

2.1. Data Collection

This linking study is based on data from the Spring 2023 administration of the MAP Growth and STAAR Spanish summative assessments. 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 have scores on both the MAP Growth and STAAR Spanish summative assessments in Spring 2023 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 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 the MAP Growth and STAAR Spanish assessments, including 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 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 STAAR Spanish summative tests (that reference some other scale) in the same subject and grade?" The correlations were calculated as:

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

where r is the correlation coefficient, x_i and y_i are the values of the *x*- and *y*-variables in a sample, and $\overline{x}$ and $\overline{y}$ 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 STAAR Spanish summative assessments are reported for grades 3–5 in Spanish mathematics and Spanish RLA, as well as for grade 2 in Spanish mathematics so that educators can track early learners' progress toward proficiency on the STAAR Spanish summative tests in mathematics by grade 3. Percentile ranks based on 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 (Kolen & Brennan, 2004) was used to identify the spring MAP Growth RIT scores for grades 3–5 in Spanish mathematics and Spanish RLA that correspond to the STAAR Spanish spring summative 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., STAAR Spanish summative tests). 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 STAAR Spanish summative tests on the scale of MAP Growth, $P(x)$ is the percentile rank of a given score on the STAAR Spanish summative 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 3–5 in Spanish mathematics and Spanish RLA. 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 in Spanish mathematics. However, because the norms study did not provide growth norms from grade 2 spring to grade 3 spring for MAP Growth Spanish RLA, grade 2 cut scores for Spanish RLA are not included in this report. Students do not begin taking the STAAR Spanish summative assessment until grade 3. Thus, to derive the spring cut scores for grade 2 mathematics, 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 in mathematics). 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 STAAR Spanish summative 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 or not proficient on the STAAR Spanish spring summative 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 proficiency (*Meets Grade Level* or higher) RIT cut does not guarantee that a 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 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 grade 2 cut scores for mathematics), the MAP Growth conditional growth norms data were also used to calculate the probability of reaching proficiency (*Meets Grade Level* or higher) on the STAAR Spanish summative tests 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 RIT (e.g., fall or winter) to the spring RIT,
- $RIT_{SpringCut}$ is the MAP Growth *Meets Grade Level* 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 (*Meets Grade Level* or higher) performance on the STAAR Spanish summative tests 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 STAAR Spanish summative assessments in Spring 2023 were included in the study sample. The Spanish mathematics and Spanish RLA data used in this study were collected from 15 districts and 263 schools in Texas. 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 STAAR Spanish tests. Since the original study sample is different from the target STAAR Spanish population, post-stratification weights were applied. Table 3.3 presents the demographic distributions of the sample after weighting, which are almost identical to the STAAR Spanish student population distributions.

Table 3.1. Linking Study Sample Demographics (Unweighted)

Demographic Subgroup		% Students by Grade		
		3	4	5
Spanish Mathematics				
	Total N	2,971	1,687	1,273
Race	Hispanic	97.9	97.6	98.0
	Other [a]	0.4	1.1	0.3
	White	1.7	1.4	1.6
Sex	Female	51.8	51.2	51.1
	Male	48.2	48.8	48.9
Performance Level	*Did Not Meet Grade Level*	39.4	49.6	37.5
	Approaches Grade Level	33.7	24.4	34.3
	Meets Grade Level	18.4	17.7	20.7
	Masters Grade Level	8.4	8.4	7.5
Spanish RLA				
	Total N	4,295	2,852	2,165
Race	Hispanic	98.6	98.5	98.4
	Other [a]	0.4	0.5	0.4
	White	1.0	1.0	1.2
Sex	Female	51.2	51.2	51.0
	Male	48.8	48.8	49.0
Performance Level	*Did Not Meet Grade Level*	43.1	50.1	37.4
	Approaches Grade Level	29.2	18.8	29.3
	Meets Grade Level	12.2	17.7	17.2
	Masters Grade Level	15.4	13.4	16.1

[a] The “Other” category includes races of American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, Two or More Races, and No Ethnicity Provided.

Table 3.2. Linking Study Population Demographics

Demographic Subgroup		% Students by Grade		
		3	4	5
Spanish Mathematics				
	Total N	16,454	11,497	8,483
Race	Hispanic	97.9	97.7	97.5
	Other [a]	0.9	1.2	1.3
	White	1.2	1.2	1.1
Sex	Female	51.4	50.5	49.2
	Male	48.6	49.5	50.8
Performance Level	*Did Not Meet Grade Level*	43.0	53.0	43.0
	Approaches Grade Level	34.0	25.0	34.0
	Meets Grade Level	17.0	15.0	18.0
	Masters Grade Level	6.0	7.0	5.0
Spanish RLA				
	Total N	30,213	21,694	15,991
Race	Hispanic	98.4	98.2	98.4
	Other [a]	0.7	0.8	0.8
	White	0.9	1.0	0.8
Sex	Female	51.3	51.3	50.4
	Male	48.7	48.7	49.6
Performance Level	*Did Not Meet Grade Level*	46.0	49.0	38.0
	Approaches Grade Level	28.0	20.0	29.0
	Meets Grade Level	12.0	18.0	19.0
	Masters Grade Level	14.0	13.0	14.0

[a] The "Other" category includes races of American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, Two or More Races, and No Ethnicity Provided.

Table 3.3. Linking Study Sample Demographics (Weighted)

Demographic Subgroup		% Students by Grade		
		3	4	5
Spanish Mathematics				
	Total N	2,971	1,687	1,273
Race	Hispanic	97.9	97.7	97.5
	Other [a]	0.9	1.1	1.3
	White	1.2	1.2	1.1
Sex	Female	51.4	50.5	49.2
	Male	48.6	49.5	50.8
Performance Level	*Did Not Meet Grade Level*	43.0	53.0	43.0
	Approaches Grade Level	34.0	25.0	34.0
	Meets Grade Level	17.0	15.0	18.0
	Masters Grade Level	6.0	7.0	5.0
Spanish RLA				

Demographic Subgroup		% Students by Grade		
		3	4	5
Total N		4,295	2,852	2,165
Race	Hispanic	98.4	98.2	98.3
	Other [a]	0.7	0.7	0.8
	White	0.9	1.0	0.8
Sex	Female	51.3	51.3	50.4
	Male	48.7	48.7	49.6
Performance Level	*Did Not Meet Grade Level*	46.0	49.0	38.0
	Approaches Grade Level	28.0	20.0	29.0
	Meets Grade Level	12.0	18.0	19.0
	Masters Grade Level	14.0	13.0	14.0

[a] The "Other" category includes races of American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, Two or More Races, and No Ethnicity Provided.

3.2. Descriptive Statistics

Table 3.4 presents descriptive statistics of the MAP Growth and STAAR Spanish summative test scores from Spring 2023, including the correlation coefficients (*r*) between them. The coefficients between the scores range from 0.74 to 0.76 for Spanish mathematics and 0.80 to 0.81 for Spanish RLA. 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 STAAR Spanish spring summative assessments.

Table 3.4. Descriptive Statistics of Test Scores

Grade	N	*r*	State Summative				MAP Growth			
			Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Spanish Mathematics										
3	2,971	0.74	1391.8	116.5	1144	2070	197.4	16.0	134	260
4	1,687	0.76	1471.3	127.5	910	2029	204.3	18.6	147	255
5	1,273	0.75	1547.6	121.3	1000	2103	206.2	17.3	146	248
Spanish RLA										
3	4,295	0.80	1338.2	152.4	600	1968	192.3	14.3	148	236
4	2,852	0.81	1407.7	147.4	680	1959	198.3	14.8	148	234
5	2,165	0.81	1480.3	161.1	720	2180	203.1	14.4	155	246

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

3.3. MAP Growth Cut Scores

Table 3.5 and Table 3.6 present the STAAR Spanish summative scale score ranges and the corresponding MAP Growth RIT cut scores and percentile ranges by content area and grade. Bold numbers indicate 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 based on the STAAR Spanish spring summative assessments when MAP Growth is taken in the fall and winter. For example, a grade 3 student who obtained a MAP Growth mathematics RIT score of 195 in the fall is likely to achieve *Meets Grade Level* performance on the STAAR Spanish mathematics summative test. A grade 3 student who obtained a MAP Growth mathematics RIT score of 204 in the winter is also likely to achieve *Meets Grade Level* performance on the STAAR Spanish mathematics spring summative assessment. The winter cut score is higher

than the fall cut score because growth is expected between fall and winter as students receive more instruction during the school year.

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 these reflect the specific instructional weeks set by partners.

Table 3.5. MAP Growth Cut Scores—Spanish Mathematics

STARR Spanish Mathematics								
Grade	***Did Not Meet***		***Approaches***		***Meets***		***Masters***	
3	≤1359		1360–1470		**1471**–1599		≥1600	
4	≤1461		1462–1556		**1557**–1689		≥1690	
5	≤1514		1515–1633		**1634**–1775		≥1776	
MAP Growth Mathematics								
Grade	***Did Not Meet***		***Approaches***		***Meets***		***Masters***	
	RIT	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**
Fall								
2	100–167	1–37	168–185	38–79	**186**–200	80–96	201–350	97–99
3	100–180	1–41	181–194	42–75	**195**–207	76–93	208–350	94–99
4	100–192	1–39	193–206	40–72	**207**–218	73–91	219–350	92–99
5	100–196	1–27	197–210	28–61	**211**–224	62–87	225–350	88–99
Winter								
2	100–175	1–36	176–193	37–78	**194**–208	79–95	209–350	96–99
3	100–188	1–40	189–203	41–75	**204**–216	76–92	217–350	93–99
4	100–199	1–39	200–214	40–72	**215**–226	73–90	227–350	91–99
5	100–202	1–30	203–216	31–61	**217**–230	62–85	231–350	86–99
Spring								
2	100–182	1–38	183–198	39–75	**199**–212	76–93	213–350	94–99
3	100–195	1–42	196–209	43–73	**210**–221	74–90	222–350	91–99
4	100–205	1–40	206–219	41–70	**220**–231	71–88	232–350	89–99
5	100–206	1–30	207–220	31–60	**221**–234	61–84	235–350	85–99

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

Table 3.6. MAP Growth Cut Scores—Spanish RLA

STARR Spanish RLA								
Grade	***Did Not Meet***		***Approaches***		***Meets***		***Masters***	
3	600–1317		1318–1446		**1447**–1514		1515–2070	
4	680–1407		1408–1487		**1488**–1580		1581–2110	
5	720–1430		1431–1555		**1556**–1661		1662–2180	
MAP Growth Spanish Reading								
Grade	***Did Not Meet***		***Approaches***		***Meets***		***Masters***	
	RIT	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**
Fall								
3	100–183	1–55	184–197	56–87	**198**–202	88–93	203–350	94–99
4	100–192	1–54	193–201	55–76	**202**–211	77–91	212–350	92–99
5	100–192	1–36	193–205	37–70	**206**–215	71–88	216–350	89–99
Winter								
3	100–189	1–53	190–201	54–83	**202**–206	84–90	207–350	91–99
4	100–197	1–55	198–205	56–75	**206**–213	76–88	214–350	89–99
5	100–197	1–38	198–208	39–68	**209**–217	69–86	218–350	87–99
Spring								
3	100–190	1–53	191–202	54–82	**203**–207	83–89	208–350	90–99
4	100–199	1–54	200–206	55–73	**207**–214	74–88	215–350	89–99
5	100–200	1–39	201–210	40–67	**211**–218	68–84	219–350	85–99

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 STAAR Spanish spring summative tests, providing insight into the predictive validity of MAP Growth. The overall classification accuracy rate ranges from 0.87 to 0.88 for Spanish mathematics and from 0.84 to 0.86 for Spanish RLA. These values suggest that the RIT cut scores are good at classifying students as proficient or not proficient on the STAAR Spanish summative assessments for most of the subjects and grades.

Although the results show that MAP Growth scores can be used to predict student proficiency on the STAAR Spanish summative tests with relatively high accuracy, there is a notable limitation to how these results should be used and interpreted. The MAP Growth and STAAR Spanish summative 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	STAAR Spanish		FP	FN				
Spanish Mathematics										
3	2,971	210	1471	0.87	0.09	0.23	0.77	0.91	0.71	0.84
4	1,687	220	1557	0.88	0.08	0.25	0.75	0.92	0.72	0.84
5	1,273	221	1634	0.87	0.08	0.29	0.71	0.92	0.73	0.81
Spanish RLA										
3	4,295	203	1447	0.86	0.09	0.28	0.72	0.91	0.74	0.82
4	2,852	207	1488	0.84	0.13	0.22	0.78	0.87	0.74	0.83
5	2,165	211	1556	0.84	0.11	0.25	0.75	0.89	0.77	0.82

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 (*Meets Grade Level* or higher) on the STAAR Spanish summative tests based on RIT scores from fall, winter, or spring. Due to measurement error in all test scores, the *Meets Grade Level* MAP Growth cuts do not guarantee that a student will reach proficiency on the STAAR Spanish summative tests. Instead, they indicate a 50% chance that a student will reach proficiency. Therefore, these projections further elucidate the *Meets Grade Level* cut scores by providing the likelihood of reaching proficiency on the STAAR Spanish spring summative assessments at a given percentile throughout the year. For example, a grade 3 student at percentile 70 who obtained a MAP Growth mathematics score of 192 in the fall has an 35% chance of reaching *Meets Grade Level* or higher on the STAAR Spanish test in spring. Additionally, an educator can also use the table to estimate that a grade 3 student who obtained a MAP Growth mathematics score of 201 in the winter has a 34% probability of reaching *Meets Grade Level* or higher on the STAAR Spanish mathematics spring summative assessment.

Table 3.8. Proficiency Projections Based on RIT Scores—Spanish Mathematics

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Meets	Prob.		*Meets*	Prob.		*Meets*	Prob.
2	5	199	147	No	<0.01	155	No	<0.01	161	No	<0.01
	10	199	153	No	<0.01	161	No	<0.01	167	No	<0.01
	15	199	157	No	<0.01	165	No	<0.01	171	No	<0.01
	20	199	160	No	<0.01	168	No	<0.01	174	No	<0.01
	25	199	162	No	0.01	171	No	<0.01	177	No	<0.01
	30	199	165	No	0.01	173	No	0.01	179	No	<0.01
	35	199	167	No	0.02	175	No	0.01	181	No	<0.01
	40	199	169	No	0.03	177	No	0.02	183	No	<0.01
	45	199	171	No	0.06	179	No	0.03	185	No	<0.01
	50	199	173	No	0.09	181	No	0.06	187	No	<0.01
	55	199	175	No	0.11	183	No	0.09	189	No	<0.01
	60	199	177	No	0.16	185	No	0.14	192	No	0.02
	65	199	179	No	0.23	187	No	0.21	194	No	0.08
	70	199	181	No	0.31	189	No	0.25	196	No	0.2
	75	199	183	No	0.4	192	No	0.4	198	No	0.39
	80	199	186	Yes	0.5	194	Yes	0.5	201	Yes	0.72
	85	199	189	Yes	0.64	197	Yes	0.65	204	Yes	0.92
	90	199	193	Yes	0.77	201	Yes	0.79	208	Yes	0.99
	95	199	198	Yes	0.91	207	Yes	0.94	214	Yes	>0.99
3	5	210	158	No	<0.01	166	No	<0.01	171	No	<0.01
	10	210	164	No	<0.01	172	No	<0.01	177	No	<0.01
	15	210	168	No	<0.01	176	No	<0.01	181	No	<0.01
	20	210	171	No	<0.01	179	No	<0.01	185	No	<0.01
	25	210	174	No	<0.01	182	No	<0.01	188	No	<0.01
	30	210	176	No	0.01	184	No	<0.01	190	No	<0.01
	35	210	178	No	0.01	186	No	0.01	193	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Meets	Prob.		*Meets*	Prob.		*Meets*	Prob.
	40	210	180	No	0.03	189	No	0.03	195	No	<0.01
	45	210	182	No	0.05	191	No	0.05	197	No	<0.01
	50	210	184	No	0.08	193	No	0.06	199	No	<0.01
	55	210	186	No	0.13	195	No	0.11	201	No	0.01
	60	210	188	No	0.19	197	No	0.17	203	No	0.02
	65	210	190	No	0.26	199	No	0.24	206	No	0.13
	70	210	192	No	0.35	201	No	0.34	208	No	0.28
	75	210	195	Yes	0.5	204	Yes	0.5	211	Yes	0.61
	80	210	197	Yes	0.6	206	Yes	0.61	213	Yes	0.8
	85	210	200	Yes	0.74	210	Yes	0.76	217	Yes	0.98
	90	210	204	Yes	0.87	214	Yes	0.89	221	Yes	>0.99
	95	210	210	Yes	0.96	220	Yes	0.98	227	Yes	>0.99
4	5	220	171	No	<0.01	176	No	<0.01	180	No	<0.01
	10	220	177	No	<0.01	183	No	<0.01	187	No	<0.01
	15	220	181	No	<0.01	187	No	<0.01	191	No	<0.01
	20	220	184	No	<0.01	190	No	<0.01	195	No	<0.01
	25	220	186	No	<0.01	193	No	<0.01	198	No	<0.01
	30	220	189	No	0.01	196	No	0.01	201	No	<0.01
	35	220	191	No	0.02	198	No	0.01	203	No	<0.01
	40	220	193	No	0.04	200	No	0.02	206	No	<0.01
	45	220	195	No	0.07	202	No	0.04	208	No	<0.01
	50	220	197	No	0.11	204	No	0.08	210	No	<0.01
	55	220	199	No	0.16	207	No	0.16	212	No	0.01
	60	220	201	No	0.23	209	No	0.2	215	No	0.08
	65	220	203	No	0.31	211	No	0.28	217	No	0.2
	70	220	205	No	0.4	213	No	0.39	220	Yes	0.5

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Meets	Prob.		*Meets*	Prob.		*Meets*	Prob.
	75	220	208	Yes	0.55	216	Yes	0.56	222	Yes	0.72
	80	220	210	Yes	0.65	219	Yes	0.72	225	Yes	0.92
	85	220	214	Yes	0.81	222	Yes	0.84	229	Yes	0.99
	90	220	217	Yes	0.89	226	Yes	0.94	233	Yes	>0.99
	95	220	223	Yes	0.98	232	Yes	0.99	240	Yes	>0.99
5	5	221	180	No	<0.01	183	No	<0.01	186	No	<0.01
	10	221	185	No	<0.01	189	No	<0.01	192	No	<0.01
	15	221	189	No	<0.01	194	No	<0.01	197	No	<0.01
	20	221	193	No	0.01	197	No	<0.01	200	No	<0.01
	25	221	195	No	0.01	200	No	0.01	204	No	<0.01
	30	221	198	No	0.05	203	No	0.02	206	No	<0.01
	35	221	200	No	0.08	205	No	0.04	209	No	<0.01
	40	221	202	No	0.12	207	No	0.08	211	No	<0.01
	45	221	204	No	0.19	210	No	0.16	214	No	0.02
	50	221	206	No	0.26	212	No	0.24	216	No	0.08
	55	221	208	No	0.35	214	No	0.33	218	No	0.2
	60	221	210	No	0.45	216	No	0.44	221	Yes	0.5
	65	221	212	Yes	0.55	219	Yes	0.61	223	Yes	0.72
	70	221	215	Yes	0.7	221	Yes	0.72	226	Yes	0.92
	75	221	217	Yes	0.78	224	Yes	0.84	228	Yes	0.98
	80	221	220	Yes	0.88	226	Yes	0.9	232	Yes	>0.99
	85	221	223	Yes	0.94	230	Yes	0.97	235	Yes	>0.99
	90	221	227	Yes	0.98	234	Yes	0.99	240	Yes	>0.99
	95	221	233	Yes	>0.99	240	Yes	>0.99	246	Yes	>0.99

Table 3.9. Proficiency Projections Based on RIT Scores—Spanish RLA

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Meets	Prob.		*Meets*	Prob.		*Meets*	Prob.
3	5	203	159	No	<0.01	166	No	<0.01	166	No	<0.01
	10	203	164	No	<0.01	171	No	<0.01	171	No	<0.01
	15	203	168	No	<0.01	174	No	<0.01	175	No	<0.01
	20	203	170	No	<0.01	177	No	<0.01	178	No	<0.01
	25	203	173	No	<0.01	179	No	<0.01	180	No	<0.01
	30	203	175	No	<0.01	181	No	<0.01	182	No	<0.01
	35	203	177	No	0.01	183	No	<0.01	184	No	<0.01
	40	203	179	No	0.02	185	No	<0.01	186	No	<0.01
	45	203	180	No	0.03	187	No	0.01	188	No	<0.01
	50	203	182	No	0.03	189	No	0.02	190	No	<0.01
	55	203	184	No	0.06	190	No	0.03	191	No	<0.01
	60	203	186	No	0.1	192	No	0.06	193	No	<0.01
	65	203	187	No	0.12	194	No	0.11	195	No	0.01
	70	203	189	No	0.18	196	No	0.18	197	No	0.04
	75	203	191	No	0.22	198	No	0.27	199	No	0.13
	80	203	194	No	0.35	200	No	0.38	201	No	0.28
	85	203	196	No	0.45	203	Yes	0.56	204	Yes	0.61
	90	203	200	Yes	0.6	206	Yes	0.73	208	Yes	0.92
	95	203	205	Yes	0.78	211	Yes	0.91	213	Yes	>0.99
4	5	207	167	No	<0.01	172	No	<0.01	175	No	<0.01
	10	207	172	No	<0.01	177	No	<0.01	180	No	<0.01
	15	207	176	No	<0.01	181	No	<0.01	184	No	<0.01
	20	207	179	No	0.01	184	No	<0.01	187	No	<0.01
	25	207	181	No	0.01	186	No	<0.01	189	No	<0.01
	30	207	183	No	0.02	188	No	<0.01	191	No	<0.01
	35	207	185	No	0.03	190	No	0.01	193	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Meets	Prob.		*Meets*	Prob.		*Meets*	Prob.
	40	207	187	No	0.05	192	No	0.02	195	No	<0.01
	45	207	189	No	0.09	194	No	0.03	196	No	<0.01
	50	207	191	No	0.11	196	No	0.06	198	No	0.01
	55	207	193	No	0.17	198	No	0.11	200	No	0.02
	60	207	195	No	0.21	200	No	0.19	202	No	0.08
	65	207	197	No	0.29	202	No	0.24	204	No	0.2
	70	207	199	No	0.39	204	No	0.36	205	No	0.28
	75	207	201	No	0.45	206	Yes	0.5	208	Yes	0.61
	80	207	203	Yes	0.55	208	Yes	0.64	210	Yes	0.8
	85	207	206	Yes	0.66	211	Yes	0.81	213	Yes	0.96
	90	207	210	Yes	0.79	215	Yes	0.94	216	Yes	0.99
	95	207	215	Yes	0.91	220	Yes	0.99	221	Yes	>0.99
5	5	211	174	No	<0.01	178	No	<0.01	182	No	<0.01
	10	211	179	No	<0.01	183	No	<0.01	187	No	<0.01
	15	211	183	No	0.01	187	No	<0.01	190	No	<0.01
	20	211	185	No	0.01	190	No	<0.01	193	No	<0.01
	25	211	188	No	0.03	192	No	<0.01	195	No	<0.01
	30	211	190	No	0.04	194	No	0.01	197	No	<0.01
	35	211	192	No	0.07	196	No	0.02	199	No	<0.01
	40	211	194	No	0.08	198	No	0.04	201	No	<0.01
	45	211	196	No	0.14	200	No	0.08	203	No	0.01
	50	211	198	No	0.21	202	No	0.14	205	No	0.04
	55	211	200	No	0.25	204	No	0.18	206	No	0.08
	60	211	202	No	0.34	206	No	0.29	208	No	0.2
	65	211	204	No	0.39	207	No	0.36	210	No	0.39
	70	211	206	Yes	0.5	209	Yes	0.5	212	Yes	0.61
	75	211	208	Yes	0.61	212	Yes	0.71	214	Yes	0.8
	80	211	210	Yes	0.66	214	Yes	0.76	216	Yes	0.92

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Meets	Prob.		*Meets*	Prob.		*Meets*	Prob.
	85	211	213	Yes	0.79	217	Yes	0.9	219	Yes	0.99
	90	211	217	Yes	0.89	220	Yes	0.96	222	Yes	>0.99
	95	211	222	Yes	0.96	226	Yes	>0.99	227	Yes	>0.99

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