NWEA MAP Predictability Study

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Contents

EXECUTIVE SUMMARY:
NWEA MAP Predictability Study

In June 2019 The Center for Research and Reform in Education (CRRE) at Johns Hopkins University contracted with Istation to conduct a mixed-methods evaluation study of the implementation and impacts on student achievement of Istation's ISIP Early Reading (ISIP ER in grade 3) and Advanced Reading (ISIP AR in grade 4) assessments in a school district in a small city in South Carolina. The present report examines findings from multinomial logistic regression analyses of the association between ISIP scores and ELA MAP score quintiles.

The current study was designed to address the following research question:

To what degree are ISIP scores associated with NWEA MAP ELA score quintiles?

Correlational and multinomial logistic regression analyses were used to examine the associations between fall, winter, and spring 2018-19 ISIP ER and AR scores and spring 2019 NWEA MAP score quintiles for grades 3 and 4 students in the 2018-19 school year. The important findings form these analyses include:

- Fall, winter, and spring 2018-19 ISIP ER and AR scores were strongly associated with spring 2019 NWEA MAP ELA scores, with observed correlations ranging between +.73 and +.74.
- Student ISIP ER scores in the 65th percentile or higher generally had at least a 50% chance of attaining MAP ELA score quintile 4 or higher. Students with ISIP ER scores in the 90th percentile or higher had at least a 50% chance of attaining MAP ELA score quintile 5 or higher.
- Similar patterns of results were found regarding ISIP AR scores and MAP ELA score quintiles.

NWEA MAP Predictability Study

In June 2019 The Center for Research and Reform in Education (CRRE) at Johns Hopkins University contracted with Istation to conduct a mixed-methods evaluation study of the implementation and impacts on student achievement of Istation's ISIP Early Reading (ISIP ER) and Advanced Reading (ISIP AR) assessments in a school district in a small city in South Carolina. The present report examines findings from multinomial logistic regression analyses of the association between ISIP scores and ELA MAP score quintiles.

The ISIP ER assessment, developed by Dr. Joseph Torgeson, Dr. Patricia Mathes, and Dr. Jeannine Herron, is a validated computer-based adaptive testing system that provides benchmark and continuous progress monitoring of student performance. Key indicators include:

- Assessment in critical domains of reading in all tested grades
- Assessment of skills most predictive of future reading success
- Assessment of progress in each area relevant to a larger domain
- Provision of a comprehensive snapshot of reading ability

Testing occurs in a game-like and engaging environment. Scoring results are obtained and reported to teachers immediately after test completion. The assessments are nationally normed every three to five years. ISIP ER levels were originally reported on a three-tier normative grouping, based on scores associated with the 20th and 40th percentiles, similar to the Response to Intervention (RTI) model. During the 2018-19 school year, however, the reporting system was changed by Istation to a five-tier grouping model.

The current study was designed to address the following research question:

To what degree are ISIP scores associated with NWEA MAP ELA quintiles?

Method

Research Design

This set of analyses analyzed retrospective ELA test data from the 2018-19 school year from a school district in the southeastern United States. Specifically, ELA scores from the NWEA MAP and Istation Indicators of Progress (ISIP) assessments were examined in this study. Correlational analyses were conducted that examined the interrelationships between ISIP scores and MAP ELA test scores and quintiles.

Participants

The district is a "small city" district of approximately 7,400 students in the southeastern United States. The majority of its students (53%) are White, with Black students (40%) constituting the next largest ethnic subgroup. Approximately 70% of the students come from economically disadvantaged families, 7% are Limited English Proficient students, and 11% are disabled/special education students. For the purposes of the present analyses, five schools support the grade levels that have participated in ISIP ER and AR testing for multiple years. The schools are fairly diverse in student demographics.

Student demographics for participants in this evaluation are displayed in Table 1. "Other Race" is defined as ethnicities other than White, Black, and Hispanic/Latino, which are the three dominant ethnicities in the district. The analytic sample generally had smaller proportions of White students and larger proportions of Black students than did the overall district. Proportions of economically disadvantaged, special education, and LEP students were generally similar to district-wide proportions.

Table 1
Student characteristics for analytic sample

Group	
% Black	55.24
% White	34.52
% Hispanic	7.47
% Other Race	10.25
% Female	51.05
% Economically disadvantaged	64.07
% Students with Disabilities/SPED	14.11
% ELs	7.51
N	2,196

Measures

Data sources for the current study include student ISIP scores and MAP ELA scores. Specifically, scores from the 2018-19 school year for grades 3 and 4 students were analyzed to examine the probability of students reaching different quintiles of MAP ELA achievement, on the basis of fall 2018, winter 2019, and spring 2019 ISIP ER and AR scores.

ISIP ER and AR scores. Overall and sub-domain ISIP data were obtained for students in grades 3 and 4 in the 2018-19 school year who also had non-missing MAP ELA scores in this same school year. Sub-domains included Alphabetic Decoding, Comprehension, Letter Knowledge, Listening Comprehension, Phonemic Awareness, Spelling, Text Fluency, and Vocabulary. For the purpose of beginning and end-of-year comparisons, fall and spring scores were derived from monthly ISIP scores. The September ISIP score was used as the fall score; if this was missing, then the first non-

missing score from October, August, and November was used as the fall score. The January score was used as the winter score; if this was missing, then the first non-missing score from February and December was used. The spring score was defined as the May ISIP score; if this was missing, then the first non-missing score from June and April was used as the spring score.

ISIP ER and AR scores are nationally normed across grades, meaning that similar numerical scores across grades, on a particular test, can be interpreted as reflecting the same ability level (Mathes, Torgesen, & Herron, 2016). For example, a Grade 2 student scoring at 200 and a Grade 3 student scoring at 200 on the ISIP ER test would be indicative of performance at the same ability level. In this study, however, only one grade level (3 or 4) was examined for each ISIP test. Score ranges vary for ISIP ER and AR assessments; Table 2 shows overall ISIP score ranges for grades 3 and 4 in the 2018-19 school year.

Table 2
ISIP ER and AR score ranges, by grade

Grade	ISIP Score range
Grade 3	167-371
Grade 4	813-2720

NWEA MAP scores. Student achievement data were the NWEA Measures of Academic Progress (MAP) ELA exams administered to all district students in grades K-5. MAP RIT scores are vertically scaled so that scores can be directly compared across grade levels, although it is generally expected that students' scores will increase as they progress through grade levels. We present the observed ranges of RIT reading scores in 2018-19 for grades 3 and 4 students in Table 3.

Table 3
MAP RIT reading scores ranges, by grade

Grade	MAP RIT reading score range
Grade 3	141-232
Grade 4	149-235

NWEA does not classify scores into proficiency levels, similar to many state standardized assessments, but does provide percentile ranks for scores. These percentiles were used to classify ELA MAP RIT scores into achievement quintiles. Score ranges for MAP RIT quintiles are displayed in Table 4.

Table 4
MAP RIT reading score quintiles, by grade

Grade	Grade 3	Grade 4
Quintile 1	<183	<191
Quintile 2	183-193	191-202

Quintile 3	193-201	201-209
Quintile 4	201-211	209-219
Quintile 5	>211	>219

Analytical Approach

Multinomial logistic regression was used to examine the associations between ISIP scores and spring 2019 NWEA MAP ELA achievement quintiles. Students who had ISIP scores between the 1st and 99th percentiles, as well as non-missing spring 2019 MAP ELA scores, were included in these analyses. We also included demographic variables in these analyses, allowing for control of potential confounding variables and a more accurate picture of the association between ISIP scores and MAP ELA achievement quintiles. The use of multinomial logistic regression allowed for the estimate of the probabilities that students obtain a certain MAP achivement quintile, given their ISIP score. For example, an estimated probability for quintile 3 achievement would represent the probability that a student with a given score would attain quintile 3 or higher achievement. Naturally, predicted probabilities for higher achievement quintiles will become lower, for the same ISIP score. Descriptive analyses and correlations were computed using STATA, and multinomial regression analyses were performed using the "nnet" package in R.

Results

We first provide descriptive statistics regarding the ISIP and NWEA MAP ELA assessments. Tables 5 and 6 show the average ISIP ER and AR scores, along with NWEA MAP ELA scores, for the analytic sample, along with the breakdown of students by achievement level for each assessment. Most grade 3 students had MAP scores in the middle three quintiles, while grade 4 students tended to have lower quintile scores, with over 70% of MAP scores in the lowest three quintiles.

Table 5
ISIP and MAP score frequencies and percentages, Grade 3 (n = 363)

ISIP ER Mean	**Istation Tier Frequencies**				
	1	2	3		
235.43	184 (50.69%)	88 (24.24%)	91 (25.07%)		
NWEA MAP RIT Mean	**NWEA MAP RIT Level Frequencies**				
	1	2	3	4	5

195.90	61 (16.80%)	84 (23.14%)	94 (25.90%)	75 (20.66%)	49 (13.50%)

Table 6

ISIP and MAP score frequencies and percentages, Grade 4 (n = 439)

ISIP AR Mean	**Istation Tier Frequencies**				
	1	2	3		
1780.84	201 (45.79%)	97 (22.10%)	141 (32.12%)		
NWEA MAP RIT Mean	**NWEA MAP RIT Level Frequencies**				
	1	2	3	4	5
199.71	117 (26.65%)	103 (23.46%)	98 (22.32%)	86 (19.59%)	35 (7.97%)

Relationships between ISIP ER scores and NWEA achievement quintiles

In this section, we examine the results of multinomial logistic regression analyses of the predictive utility of ISIP ER scores on NWEA MAP ELA achievement quintiles. In these analyses, we used ISIP ER scores form each of the fall, winter, and spring of the 2018-19 school year to predict MAP achievement quintiles in the spring of 2019. These analyses were limited to grade 3 students.

The Pearson correlation between ISIP ER scores and MAP ELA scores ranged from +.73 for spring ISIP scores to +.74 for fall and winter ISIP scores. Correlations of these magnitudes indicate that ISIP ER scores have high levels of predictive validity in relation to MAP ELA scores, indicating that students with higher ISIP ER scores tended to have higher MAP ELA scores.

Projected achievement of Quintiles 4 and 5, ISIP ER scores. We now examine the results of multinomial logistic regression analyses concerning the predictive utility of ISIP ER scores on MAP ELA achievement quintiles. We display probabilities for every 5th percentile of ISIP scores in this sample, as well as the 99th percentile score. We are focusing on the probabilities of obtaining the highest two achievement quintiles in these analyses. It is important to consider that these probabilities of attaining a given achievement quintile are the sums of the probabilities of achievement at that level or a higher level. Thus, the probability of attaining quintile 4 achievement, for example, is p(quintile 1) + p(quintile 2) + p(quintile 3) + p(quintile 4). Tables 7-9 show the predicted probabilities of MAP achievement quintiles 4 and 5 for various ISIP ER scores from fall 2018, winter 2019, and spring 2019, respectively. Tables of predicted probabilities of MAP ELA quintile 2 and 3 scores are included in the Appendix. We also

included probability bands of low, medium, or high for each estimate. The utility of these probability bands will be discussed later.

Table 7
Predictability table for MAP ELA score quintiles 4 and 5, Fall 2018 ISIP ER Scores

ISIP Score	Percentile Rank	Probability	Quintile 4	Probability	Quintile 5
204	5	.001	Low	<.001	Low
216	10	.010	Low	.001	Low
220	15	.021	Low	.002	Low
223	20	.036	Low	.004	Low
225	25	.051	Low	.006	Low
227	30	.083	Low	.012	Low
230	35	.112	Low	.017	Low
232	40	.149	Low	.026	Low
234	45	.194	Low	.037	Low
236	50	.247	Low	.051	Low
237	55	.277	Low	.060	Low
239	60	.340	Medium	.081	Low
241	65	.409	Medium	.107	Low
244	70	.516	Medium	.153	Low
246	75	.585	Medium	.189	Low
250	80	.712	High	.269	Low
252	85	.765	High	.310	Low
257	90	.867	High	.415	Medium
263	95	.937	High	.533	Medium
277	99	.991	High	.746	High

Table 8
Predictability table for MAP ELA score quintiles 4 and 5, Winter 2019 ISIP ER Scores

ISIP Score	Percentile Rank	Probability	Quintile 4	Probability	Quintile 5
201	5	.001	Low	<.001	Low
212	10	.004	Low	<.001	Low
219	15	.012	Low	.001	Low
225	20	.032	Low	.003	Low
228	25	.050	Low	.005	Low
232	30	.089	Low	.011	Low
234	35	.116	Low	.016	Low
236	40	.150	Low	.024	Low
238	45	.191	Low	.033	Low
240	50	.240	Low	.047	Low
241	55	.267	Low	.054	Low

243	60	.326	Low	.073	Low
245	65	.391	Medium	.097	Low
247	70	.459	Medium	.125	Low
252	75	.629	Medium	.213	Low
254	80	.691	High	.254	Low
258	85	.796	High	.341	Medium
262	90	.872	High	.428	Medium
269	95	.948	High	.569	Medium
285	99	.995	High	.800	High

Table 9

Predictability table for MAP ELA score quintiles 4 and 5, Spring 2019 ISIP ER Scores

ISIP Score	Percentile Rank	Probability	Quintile 4	Probability	Quintile 5
203	5	<.001	Low	<.001	Low
217	10	.006	Low	<.001	Low
225	15	.020	Low	.001	Low
229	20	.038	Low	.003	Low
232	25	.058	Low	.006	Low
234	30	.077	Low	.008	Low
237	35	.115	Low	.015	Low
238	40	.131	Low	.017	Low
241	45	.187	Low	.029	Low
244	50	.258	Low	.048	Low
245	55	.285	Low	.054	Low
247	60	.344	Medium	.072	Low
249	65	.406	Medium	.094	Low
252	70	.504	Medium	.133	Low
256	75	.631	Medium	.198	Low
258	80	.689	High	.235	Low
262	85	.788	High	.313	Low
266	90	.862	High	.394	Medium
296	95	.947	High	.547	Medium
285	99	.997	High	.836	High

The results in Tables 7-9 show how likely a student is to attain quintiles 4 or 5 MAP ELA scores in the spring of 2019. For example, a student with a fall 2018 ISIP ER score of 241 has a 40.9% chance of attaining a MAP ELA score in quintile 4 or 5, and a 10.7% chance of obtaining a MAP ELA score in quintile 5. In terms of important cut points, such as scores where students have 50% or higher probability of attaining an achievement quintile, students with a fall 2018 ISIP score of 244 had a 51.6% chance of attaining a quintile 4 or higher MAP ELA score, while students who obtained a fall 2018 ISIP ER score of 263 had a 53.3% chance of attaining a quintile 5 MAP ELA score. The corresponding cut points for winter 2019 ISIP ER scores were 252 (62.9% chance

of quintile 4 or 5 MAP ELA score) and 269 (56.9% chance of quintile 5 MAP ELA score). In spring 2019, these cut points were 252 (50.4% chance of quintile 4 or 5 MAP ELA score) and 296 (54.7% chance of quintile 5 MAP ELA score).

Probability bands. In supplementary analyses, we used cut point probabilities of .33 and .67 to create probability bands of "low," "medium," and "high" for all ISIP ER scores considered in the prior analyses. Probabilities of less than .33 were considered "low," probabilities between .33 and .67 were considered "medium," and probabilities greater than .67 were considered "high." These cut points allow for more easily digestible summarizations of the probabilities derived from the prior analyses. For example, regarding quintile 4 scores, students with fall 2018 ISIP ER scores of 237 or less would have a low probability of attaining at least a quintile 4 MAP ELA score, while students with fall 2018 ISIP ER scores of 252 or less would have a low probability of attaining a quintile 5 MAP ELA score. Similarly, students with fall 2018 ISIP ER scores between 237 and 246 would have a medium probability of attaining at least a quintile 4 MAP ELA score, while students with fall 2018 ISIP ER scores between 252 and 263 would have a medium probability of attaining a quintile 5 MAP ELA Score. Table 10 shows the ISIP ER score ranges for probability bands of MAP ELA score quintiles 4 and 5, by test date.

Table 10
Probability bands of ISIP ER scores predicting MAP ELA achievement quintiles

	Fall 2018	Winter 2019	Spring 2019
Level 3			
Low	<237	<243	<247
Medium	237-246	243-252	247-256
High	>246	>252	>256
Level 4			
Low	<252	<254	<266
Medium	252-263	254-269	266-296
High	>263	>269	>296

Relationships between ISIP AR scores and MAP achievement quintiles

Projected achievement of quintiles 4 and 5, ISIP AR scores. Tables 11-13 show the same estimates for MAP ELA achievement quintiles, as predicted by ISIP AR scores.

Table 11
Predictability table for MAP ELA score quintiles 4 and 5, Fall 2018 ISIP AR Scores

ISIP Score	Percentile Rank	Probability	Quintile 4	Probability	Quintile 5
1474	5	.001	Low	<.001	Low
1582	10	.010	Low	<.001	Low

1639	15	.025	Low	<.001	Low
1672	20	.042	Low	<.001	Low
1704	25	.065	Low	.001	Low
1735	30	.097	Low	.002	Low
1757	35	.125	Low	.003	Low
1782	40	.164	Low	.005	Low
1809	45	.213	Low	.009	Low
1834	50	.265	Low	.015	Low
1856	55	.315	Low	.023	Low
1877	60	.367	Medium	.034	Low
1903	65	.435	Medium	.053	Low
1922	70	.486	Medium	.072	Low
1955	75	.577	Medium	.119	Low
1985	80	.658	Medium	.178	Low
2034	85	.779	High	.313	Low
2077	90	.863	High	.458	Medium
2163	95	.960	High	.731	High
2291	99	.996	High	.934	High

Table 12

Predictability table for MAP ELA score quintiles 4 and 5, Winter 2019 ISIP AR Scores

ISIP Score	Percentile Rank	Probability	Quintile 4	Probability	Quintile 5
1507	5	.002	Low	<.001	Low
1607	10	.013	Low	<.001	Low
1655	15	.027	Low	<.001	Low
1697	20	.049	Low	<.001	Low
1728	25	.072	Low	.001	Low
1762	30	.107	Low	.002	Low
1794	35	.149	Low	.004	Low
1815	40	.180	Low	.006	Low
1837	45	.218	Low	.009	Low
1865	50	.270	Low	.014	Low
1884	55	.307	Low	.020	Low
1908	60	.358	Medium	.030	Low
1935	65	.417	Medium	.046	Low
1966	70	.486	Medium	.073	Low
1996	75	.555	Medium	.110	Low
2038	80	.650	Medium	.185	Low
2080	85	.741	High	.289	Low
2115	90	.808	High	.394	Medium
2194	95	.919	High	.643	Medium
2324	99	.987	High	.899	High

Table 13
Predictability table for MAP ELA score quintiles 4 and 5, Spring 2019 ISIP AR Scores

ISIP Score	Percentile Rank	Probability	Quintile 4	Probability	Quintile 5
1527	5	.003	Low	<.001	Low
1603	10	.008	Low	<.001	Low
1652	15	.016	Low	<.001	Low
1708	20	.034	Low	<.001	Low
1746	25	.055	Low	.001	Low
1787	30	.089	Low	.002	Low
1812	35	.116	Low	.003	Low
1836	40	.147	Low	.004	Low
1864	45	.191	Low	.007	Low
1901	50	.260	Low	.015	Low
1923	55	.307	Low	.021	Low
1951	60	.371	Medium	.034	Low
1976	65	.432	Medium	.049	Low
2010	70	.518	Medium	.080	Low
2042	75	.599	Medium	.122	Low
2077	80	.683	High	.183	Low
2122	85	.779	High	.288	Low
2169	90	.860	High	.420	Medium
2268	95	.959	High	.697	High
2370	99	.991	High	.877	High

As in the previous set of analyses, the probability shown in a given row is the probability that a student with a corresponding ISIP AR score would attain a given MAP ELA achievement quintile. For example, a student with a fall 2018 ISIP AR score of 1903 would have a 43.5% probability of attaining a MAP ELA score in quintile 4 or higher, and a 5.3% probability of attaining a MAP ELA score in quintile 5.

Probability bands. The same cut points for "low," "medium," and "high" probabilities were used in these analyses. For example, regarding quintile 4 achievement, students with fall 2018 ISIP AR scores of 1856 or less had a low probability of attaining quintile 4 or higher MAP ELA achievement, while students with fall 2018 ISIP AR scores of 2034 or less had a low probability of attaining quintile 5 MAP ELA achievement. Similarly, students with fall 2018 ISIP AR scores between 1877 and 1985 had a medium probability of attaining quintile 4 or higher MAP ELA achievement, while students with fall 2018 ISIP AR scores between 2077 and 2163 had a medium probability of attaining quintile 5 MAP ELA achievement. Table 14 shows the ISIP AR score ranges for probability bands of MAP ELA achievement quintiles 4 and 5, by test date.

Table 14

Probability bands of ISIP AR scores predicting MAP ELA score quintiles

	Fall 2018	Winter 2019	Spring 2019
Level 3			
Low	<1856	<1884	<1923
Medium	1856-1985	1884-2038	1923-2042
High	>1985	>2038	>2042
Level 4			
Low	<2034	<2080	<2122
Medium	2034-2077	2080-2194	2122-2169
High	>2077	>2194	>2268

Discussion

In this study, we performed a set of multinomial logistic regression analyses to estimate the probability of students attaining different quintiles of NWEA MAP ELA scores, based on ISIP ER and ISIP AR scores. Specifically, we used fall 2018, winter 2019, and spring 2019 ISIP ER and AR scores to predict score quintiles on the spring 2019 NWEA MAP ELA assessment. In previous analyses, we found that observed correlations between 2018-19 ISIP scores and spring 2019 MAP ELA scores ranged from +.73 to +.74, indicating strong, statistically significant positive associations between ISIP and MAP ELA scores. The current analyses allowed us to move a step beyond and make predictions about levels of student achievement on the MAP assessment, on the basis of ISIP ER and AR scores.

Among the important findings in these analyses, we found that students with ISIP ER scores between the 65th and 75th percentile had a probability of approximately 50% of attaining a MAP ELA score in quintile 4 or greater, while students with ISIP ER scores between the 90th and 95th percentile had about a 50% chance of attaining a MAP ELA score in quintile 5. These same findings hold for ISIP AR scores as well, as students with ISIP AR scores between the 65th and 75th percentile had around a 50% probability of obtaining a MAP ELA score in quintile 4 or greater, while students with ISIP AR scores between the 90th and 95th percentile had about a 50% chance of attaining a MAP ELA score in quintile 5.

In addition, we classified ranges of ISIP scores as having a low, medium, or high probability of being associated with a given MAP ELA score quintile. Low probability was defined as a less than 33% chance of attaining a score quintile, medium probability was defined as between 33% and 67%, and high probability was defined as greater than 67%. In terms of attaining quintile 4 MAP ELA scores, students with a 55th percentile or lower ISIP ER score had a low probability of attainment, students with 55th-75th percentile ISIP ER scores had a medium probability of attainment, and students with 80th percentile or higher ISIP ER scores had a high probability of attainment. In terms of attaining quintile 5 MAP ELA scores, students with 85th percentile or lower ISIP ER

scores had a low probability of attainment, students with 85th-95th percentile ISIP ER scores had a medium probability of attainment, and students with greater than 95th percentile ISIP ER scores had a high probability of attainment. These general patterns of associations were also found with ISIP AR scores, with little variation. Patterns of associations were generally consistent across fall, winter, and spring 2018-19 ISIP scores.

The results of these analyses may provide useful achievement benchmarks for students, teachers, and administrators. Knowledge of student ISIP ER and AR scores, along with the predicted probabilities of MAP ELA score quintiles, can be used to help teachers set achievement goals related to Istation instruction throughout the school year.

Limitations

The present analyses were restricted to ISIP ER and AR scores, as well as NWEA MAP ELA scores and achievement levels, for elementary students in one school district. Thus, generalization to other school districts and of the relationships between ISIP scores and other ELA assessments cannot be established. In addition, these analyses were only correlational in nature, so causal inferences cannot be made regarding ISIP scores and MAP ELA score quintiles.

Conclusions

The main findings from this study are as follows:

- Fall, winter, and spring 2018-19 ISIP ER and AR scores were strongly associated with spring 2019 NWEA MAP ELA scores, with observed correlations ranging between +.73 and +.74.
- Student ISIP ER scores in the 65th percentile or higher generally had at least a 50% chance of attaining MAP ELA score quintile 4 or higher. Students with ISIP ER scores in the 90th percentile or higher had at least a 50% chance of attaining MAP ELA score quintile 5 or higher.
- Similar patterns of results were found regarding ISIP AR scores and MAP ELA score quintiles.

Appendix: Predictability Tables for MAP Quintiles 2 and 3

Table 1

Predictability table for MAP ELA quintiles 2 and 3, Fall 2018 ISIP ER Scores

ISIP Score	Percentile Rank	Probability	Quintile 2	Probability	Quintile 3
204	5	.284	Low	.001	Low
216	10	.536	Medium	.143	Low
220	15	.631	Medium	.212	Low
223	20	.701	High	.277	Low
225	25	.746	High	.327	Low
227	30	.807	High	.409	Medium
230	35	.843	High	.469	Medium
232	40	.875	High	.530	Medium
234	45	.903	High	.592	Medium
236	50	.927	High	.653	Medium
237	55	.937	High	.682	High
239	60	.954	High	.738	High
241	65	.967	High	.789	High
244	70	.981	High	.854	High
246	75	.987	High	.889	High
250	80	.995	High	.940	High
252	85	.997	High	.957	High
257	90	.999	High	.982	High
263	95	.999	High	.995	High
277	99	.999	High	.999	High

Table 2

Predictability table for MAP ELA quintiles 2 and 3, Winter 2019 ISIP ER Scores

ISIP Score	Percentile Rank	Probability	Quintile 2	Probability	Quintile 3
201	5	.339	Low	.049	Low
212	10	.496	Medium	.121	Low
219	15	.609	Medium	.201	Low
225	20	.706	High	.297	Low
228	25	.753	High	.355	Medium
232	30	.811	High	.443	Medium
234	35	.838	High	.490	Medium
236	40	.863	High	.540	Medium
238	45	.886	High	.590	Medium
240	50	.907	High	.641	Medium
241	55	.917	High	.667	Medium
243	60	.934	High	.716	High
245	65	.949	High	.763	High

247	70	.961	High	.806	High
252	75	.983	High	.893	High
254	80	.988	High	.919	High
258	85	.994	High	.956	High
262	90	.998	High	.977	High
269	95	.999	High	.994	High
285	99	.999	High	.999	High

Table 3

Predictability table for MAP ELA quintiles 2 and 3, Spring 2019 ISIP ER Scores

ISIP Score	Percentile Rank	Probability	Quintile 2	Probability	Quintile 3
203	5	.355	Medium	.037	Low
217	10	.551	Medium	.122	Low
225	15	.675	High	.223	Low
229	20	.736	High	.295	Low
232	25	.780	High	.353	Medium
234	30	.808	High	.398	Medium
237	35	.847	High	.470	Medium
238	40	.859	High	.495	Medium
241	45	.892	High	.572	Medium
244	50	.921	High	.651	Medium
245	55	.929	High	.676	High
247	60	.945	High	.726	High
249	65	.957	High	.772	High
252	70	.972	High	.834	High
256	75	.986	High	.898	High
258	80	.990	High	.922	High
262	85	.995	High	.957	High
266	90	.998	High	.978	High
296	95	.999	High	.995	High
285	99	.999	High	.999	High

Table 4

Predictability table for MAP ELA quintiles 2 and 3, Fall 2019 ISIP AR Scores

ISIP Score	Percentile Rank	Probability	Quintile 2	Probability	Quintile 3
1474	5	.147	Low	.022	Low
1582	10	.338	Medium	.086	Low
1639	15	.485	Medium	.160	Low
1672	20	.577	Medium	.219	Low
1704	25	.664	Medium	.288	Low
1735	30	.743	High	.364	Medium
1757	35	.792	High	.421	Medium

1782	40	.841	High	.488	Medium
1809	45	.885	High	.559	Medium
1834	50	.917	High	.623	Medium
1856	55	.939	High	.677	High
1877	60	.955	High	.725	High
1903	65	.970	High	.779	High
1922	70	.979	High	.814	High
1955	75	.988	High	.867	High
1985	80	.993	High	.906	High
2034	85	.998	High	.951	High
2077	90	.999	High	.975	High
2163	95	1.000	High	.995	High
2291	99	1.000	High	1.000	High

Table 5

Predictability table for MAP ELA quintiles 2 and 3, Winter 2019 ISIP AR Scores

ISIP Score	Percentile Rank	Probability	Quintile 2	Probability	Quintile 3
1507	5	.212	Low	.024	Low
1607	10	.393	Medium	.083	Low
1655	15	.505	Medium	.141	Low
1697	20	.609	Medium	.214	Low
1728	25	.684	High	.280	Low
1762	30	.760	High	.364	Medium
1794	35	.823	High	.449	Medium
1815	40	.858	High	.506	Medium
1837	45	.889	High	.566	Medium
1865	50	.922	High	.638	Medium
1884	55	.939	High	.684	High
1908	60	.956	High	.738	High
1935	65	.971	High	.791	High
1966	70	.982	High	.843	High
1996	75	.989	High	.885	High
2038	80	.995	High	.929	High
2080	85	.998	High	.959	High
2115	90	.999	High	.975	High
2194	95	1.000	High	.994	High
2324	99	1.000	High	1.000	High

Table 6

Predictability table for MAP ELA quintiles 2 and 3, Spring 2019 ISIP AR Scores

ISIP Score	Percentile Rank	Probability	Quintile 2	Probability	Quintile 3
1527	5	.284	Low	.043	Low

1603	10	.388	Medium	.086	Low
1652	15	.467	Medium	.131	Low
1708	20	.567	Medium	.203	Low
1746	25	.637	Medium	.267	Low
1787	30	.711	High	.349	Medium
1812	35	.754	High	.405	Medium
1836	40	.793	High	.461	Medium
1864	45	.835	High	.529	Medium
1901	50	.882	High	.618	Medium
1923	55	.905	High	.669	Medium
1951	60	.930	High	.730	High
1976	65	.948	High	.780	High
2010	70	.967	High	.838	High
2042	75	.979	High	.883	High
2077	80	.988	High	.922	High
2122	85	.994	High	.956	High
2169	90	.998	High	.978	High
2268	95	1.000	High	.996	High
2370	99	1.000	High	1.000	High