Linking Istation ISIP Early Reading with the Idaho ISAT

May 2020

JOHNS HOPKINS
SCHOOL of EDUCATION

Center for Research and Reform in Education

Linking Istation ISIP Early Reading with the Idaho ISAT

The Center for Research and Reform in Education (CRRE) is a research center affiliated with the School of Education at Johns Hopkins University (JHU) that specializes in education program evaluations in K–12. Istation contracted with the CRRE at JHU to conduct a study of the predictive validity of Istation's Early Reading (ER) program (https://www.istation.com/Reading) in the state of Idaho.

This brief provides a summary of the validity of Istation ISIP Early Reading scores in predicting students' performance levels on the Idaho Standards Achievement Test (ISAT) in English language arts (ELA). For more details, please reference the full technical report.

Methods

This correlational study analyzed how well third grade students' winter performance on the ISIP Early Reading test predicted their spring performance on the ISAT ELA. Because ISIP Early Reading became the state of Idaho's mandatory early literacy assessment at the start of the 2018–19 school year for students in grades K–3, the ISIP was administered to all third grade students in Idaho.

Sample

- 370 elementary schools
- About 19,000 third grade students
- About 76% of students were White and 18% were Latino
- About 50% of students were economically disadvantaged
- 10% of students were English learners
- 12% received special education services

Measures

- Istation's ISIP Early Reading was administered to students twice a school year, with most schools opting to administer the assessment three times a year in the fall, winter, and spring. The ISIP covered phonemic awareness, letter knowledge, alphabetic decoding, spelling, vocabulary, listening comprehension, and text fluency.
- The ISAT in ELA was administered to students annually in the spring. Students were scored in terms of scale scores and four performance levels (e.g., below basic, basic, proficient, or advanced).

Analytic Approach

Third grade students' winter 2019 ISIP Early Reading scores were used to predict their spring ISAT ELA 2019 performance levels using multinomial logistic regression. The probability of scoring at various performance levels on the ISAT in ELA was calculated for students with different percentile rankings on the ISIP Early Reading test. The analysis was restricted to students who scored between the 1st and 99th percentiles on the winter 2019 ISIP.

Results

Third grade students in Idaho had a medium (at least one in three) chance of reaching proficiency on the ISAT ELA if they scored at or above the 46th percentile on the winter ISIP, and had a high (at least two in three) chance if they scored at or above the 68th percentile.

As shown in Table 1 on the following page, third grade students who scored between the 46th and 66th percentiles on the winter ISIP Early reading test had at least a one-third chance of reaching proficiency on the ISAT ELA in the spring. Students who scored at or above the 68th percentile had at least a two-thirds chance of reaching proficiency.

Third grade students in Idaho had a medium chance of scoring advanced on the ISAT ELA if they scored at or above the 74th percentile on the winter ISIP, and had a high chance if they scored at or above the 91st percentile.

Students who scored between the 74th and 90th percentiles on the winter ISIP Early Reading test had at least a one-third chance of scoring advanced on the ISAT ELA that spring. Students who scored at the 91st percentile or higher had at least a two-thirds chance of scoring advanced.

In conclusion, practitioners can use student percentile ranks on the winter administration of the ISIP Early Reading test to understand the likelihood that third grade students will score proficient or advanced on the ISAT ELA in the spring.

Table 1: Probabilities of third graders scoring proficient or advanced on the ISAT ELA

		Proficient		Advanced	
ISIP Winter Score	Percentile Rank	Probability	Likelihood	Probability	Likelihood
200	1	0.00	Low	0.00	Low
203	2	0.00	Low	0.00	Low
207	3	0.00	Low	0.00	Low
209	4	0.00	Low	0.00	Low
212	5	0.01	Low	0.00	Low
214	6	0.01	Low	0.00	Low
215	7	0.01	Low	0.00	Low
217	8	0.01	Low	0.00	Low
218	9	0.02	Low	0.00	Low
219	10	0.02	Low	0.00	Low
220	11	0.02	Low	0.00	Low
221	12	0.02	Low	0.00	Low
222	13	0.03	Low	0.00	Low
223	14	0.03	Low	0.00	Low
224	15	0.04	Low	0.00	Low
225	16	0.04	Low	0.00	Low
226	18	0.05	Low	0.00	Low
227	19	0.06	Low	0.00	Low
228	21	0.07	Low	0.01	Low
229	22	0.08	Low	0.01	Low
230	24	0.09	Low	0.01	Low
231	25	0.10	Low	0.01	Low
232	27	0.11	Low	0.01	Low
233	29	0.13	Low	0.01	Low
234	20	0.14	Low	0.02	Low
235	32	0.16	Low	0.02	Low
236	34	0.18	Low	0.03	Low
237	36	0.20	Low	0.03	Low
238	38	0.22	Low	0.04	Low
239	40	0.25	Low	0.04	Low
240	42	0.27	Low	0.05	Low
241	44	0.30	Low	0.06	Low
242	46	0.33	Medium	0.07	Low
243	48	0.36	Medium	0.08	Low
244	50	0.39	Medium	0.09	Low
245	52	0.42	Medium	0.10	Low
246	54	0.45	Medium	0.12	Low
247	56	0.48	Medium	0.13	Low
248	58	0.51	Medium	0.15	Low
249	60	0.54	Medium	0.17	Low
250	62	0.57	Medium	0.19	Low

251	64	0.60	Medium	0.21	Low
252	66	0.63	Medium	0.23	Low
253	68	0.66	High	0.25	Low
254	70	0.69	High	0.28	Low
255	72	0.72	High	0.30	Low
256	74	0.74	High	0.33	Medium
257	75	0.76	High	0.35	Medium
258	77	0.79	High	0.38	Medium
259	78	0.81	High	0.40	Medium
260	80	0.83	High	0.43	Medium
261	81	0.84	High	0.46	Medium
262	83	0.86	High	0.48	Medium
263	84	0.88	High	0.51	Medium
264	85	0.89	High	0.53	Medium
265	86	0.90	High	0.56	Medium
266	87	0.91	High	0.58	Medium
267	88	0.92	High	0.60	Medium
268	89	0.93	High	0.63	Medium
269	90	0.94	High	0.65	Medium
270	91	0.95	High	0.67	High
271	92	0.95	High	0.69	High
272	93	0.96	High	0.71	High
274	94	0.97	High	0.75	High
275	95	0.97	High	0.76	High
277	96	0.98	High	0.79	High
279	97	0.99	High	0.82	High
282	98	0.99	High	0.85	High
286	99	0.99	High	0.89	High