



Research Brief: Exact Path Diagnostic Scale Scores Predict ILEARN Performance Levels

Summary

This research brief provides tables that predict student performance on Indiana Learning Evaluation Assessment Readiness Network (ILEARN) tests for Mathematics and English/Language Arts in grades 3 through 8 based on students' Exact Path diagnostic scores. An independent research organization, Human Resources Research Organization (HumRRO), established these tables with a linking study, which is a psychometric method to predict scores on one test (e.g., the Exact Path diagnostic) from scores on another test (e.g., ILEARN).



Results indicate a strong relationship between Exact Path diagnostic scores and ILEARN scores, which **yield highly accurate predictions of student performance on ILEARN.**

Background

Because different tests use different scales to report student scores, it can be difficult to understand how student scores on multiple tests relate to each other. For example, educators ask, "Based on a student's Exact Path diagnostic score, how is the student likely to perform on ILEARN?" This research study answers that question through a psychometric method known as linking.

Data

The linking study included approximately 11,000 students per subject in mathematics and reading across the state of Indiana who took both the Exact Path diagnostic and ILEARN in spring 2019 with no more than 60 days between each test event. Students in the study were representative of the state of Indiana according to six different demographic variables, including special education status, English language learner status, socioeconomic status, section 504 status, race/ethnicity, and gender. For more details on methods, see the full research study.



11,000 Indiana students per subject included in linking study



Representative of 6 demographic variables

SPED, ELL, socioeconomic status, 504, race/ethnicity, gender

Results

Because of the large sample size used in the linking study and the psychometric rigor of both the Exact Path diagnostic and ILEARN, predictions of ILEARN performance from the Exact Path diagnostic are highly accurate. More specifically, when classifying students into two levels with “at proficiency and above” as one group and “approaching proficiency or below” as a second group, predictions of proficiency/nonproficiency on ILEARN were accurate for about 81 to 86 percent of students.

Educators should remember that many factors affect student test performance and that, sometimes, predicted performance may not match actual performance. Results also indicated strong positive correlations, ranging from .79 to .86, between Exact Path diagnostic scores and ILEARN scores; this result provides strong predictive validity evidence for the Exact Path diagnostic.

Educators can use these tables to predict student performance on ILEARN based on students’ Exact Path diagnostic scores. For example, based on the following mathematics table, a grade 3 student scoring 930 on the Exact Path diagnostic falls within the 927 to 971 range corresponding to the “Approaching Proficiency” ILEARN performance level. The predicted ILEARN performance levels should be interpreted as: “If this student were to complete ILEARN on the same day as he or she completed the Exact Path diagnostic, what ILEARN performance level would the student likely be in?” Thus, this example student likely needs additional instruction before taking ILEARN in order to score “At Proficiency” or higher on ILEARN.



Predictions of proficiency on ILEARN were accurate for about **81–86% of students.**

Exact Path Diagnostic Scale Scores Corresponding to ILEARN Performance Levels

Exact Path Mathematics

Grade	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
3	926 and below	927-971	972-1043	1044 and above
4	975 and below	976-1025	1026-1112	1113 and above
5	1001 and below	1002-1073	1074-1152	1153 and above
6	1043 and below	1044-1118	1119-1212	1213 and above
7	1049 and below	1050-1144	1145-1240	1241 and above
8	1072 and below	1073-1191	1192-1273	1274 and above

Exact Path Reading

Grade	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
3	1006 and below	1007-1066	1067-1138	1139 and above
4	1045 and below	1046-1109	1110-1178	1179 and above
5	1083 and below	1084-1149	1150-1237	1238 and above
6	1108 and below	1109-1175	1176-1247	1248 and above
7	1128 and below	1129-1205	1206-1283	1284 and above
8	1133 and below	1134-1215	1216-1295	1296 and above