

i-Ready[®] *Diagnostic*
New York State Validity Study

Curriculum Associates[®], LLC

Executive Summary

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Overview

Effective reading and mathematics skills are crucial if students are to achieve the goals established by the Common Core State Standards (CCSS), which stress higher-level knowledge and skills in both reading and mathematics for students to become college and career ready.

To help students in Kindergarten through grade 12 develop the needed skills and strategies, Curriculum Associates developed *i-Ready*[®] *Diagnostic & Instruction* for both reading and mathematics. This online program addresses the challenges facing educators—increased focus on accountability and transitioning to the Common Core, while meeting the instructional needs of students above, on, and below grade level. *i-Ready* combines an adaptive diagnostic assessment with individualized instruction, reliable progress monitoring, and comprehensive reporting for teachers and administrators. The intuitive reports track student progress toward mastery of the Common Core State Standards and explicitly inform instructional decision making.

To examine the validity of *i-Ready Diagnostic*, Curriculum Associates contracted with Educational Research Institute of America (ERIA) to conduct a study on the relationship between the *i-Ready* end-of-year diagnostic scores in reading and mathematics and the actual New York State (NYS) English Language Arts (ELA) and Mathematics scores of the same students for 2012 and 2013. Greater emphasis was placed on comparing *i-Ready Diagnostic* scores with the 2013 NYS scores, since the 2013 assessment was focused on the Common Core, as is *i-Ready Diagnostic*. The study included 6,500 students in grades 3 to 8. Of the students in grades 4 to 8, 2012 NYS scores were also available for almost 5,000 students. Students were enrolled in 22 schools in 5 districts across the state of New York.

The results showed that the *i-Ready Diagnostic* scores and the NYS ELA and Mathematics scores were highly correlated. Regression analyses provided firm evidence that the *i-Ready Diagnostic* scores were statistically significant predictors of end-of-year NYS ELA and Mathematics scores at grades 3 to 8.

Finally, using regression models, the *i-Ready Diagnostic* scores were used to make predictions of the 2013 NYS ELA and Mathematics scores. The predicted and actual reading and mathematics proficiency/performance levels were exactly the same or within one level for 95% to 99% of all students.

The study provides overwhelmingly positive evidence of the validity of the *i-Ready Diagnostic* Reading and Mathematics scores when compared to the NYS ELA and Mathematics scores.

Educational Research Institute of America

Educational Research Institute of America (ERIA) is an educational research and development company that contracts with textbook companies, state departments of education, and school districts to conduct educational program tryout studies, develop instructional materials, analyze tests and test scores, and conduct technical studies for educational assessments. ERIA was founded in 1999 as an outgrowth of Indiana University Center for Research and Development, entitled the Center for Innovation in Assessment. Over the past decade, ERIA has conducted development and research projects for over 20 publishers, state departments of education, and other agencies.

Dr. Roger Farr,
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ERIA

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Research Questions and Findings

Three research questions guided the study. The major findings are summarized below.

Question 1: Is *i-Ready Diagnostic* correlated to the New York State ELA and Mathematics tests administered to students in 2012 and 2013?

i-Ready Diagnostic was designed to assess reading and mathematics skills. The assessments were correlated to the 2012 NYS ELA and Mathematics test scores for almost 5,000 students. The assessments were correlated to the 2013 NYS ELA and Mathematics test scores for approximately 6,500 students. The correlations for students at each grade level were very high. Overall, the 2013 correlations were higher than 2012.

The 2013 correlations for reading ranged from a low of .79 to a high of .85 across grades 3 to 8. The 2012 correlations for reading ranged from a low of .79 to a high of .83. The 2013 correlations for mathematics ranged from a low of .77 to a high of .84 across grades 3 to 8. The 2012 correlations for mathematics ranged from a low of .72 to a high of .78.

Not only were the correlations high, they were all statistically significant at $\leq .001$. The correlations indicated that *i-Ready Diagnostic* and the NYS tests were assessing similar constructs, further supporting the strong concurrent validity of *i-Ready*.

Question 2: Is *i-Ready Diagnostic* a statistically significant predictor of performance on the 2013 New York State ELA and Mathematics tests?

Regression analyses were conducted for all students and also for the group of students at each grade. For these regression analyses, the predictor variables was either the *i-Ready Diagnostic* overall reading or mathematics scale score. The predicted variable was the NYS ELA or NYS Mathematics test score, respectively.

The regression analyses for the total group of students in both subjects and for all of the grade-level groups were significant at $\leq .001$. These results provide evidence of the predictive validity of *i-Ready Diagnostic* when *i-Ready* is used to predict NYS test scores.

Question 3: Can *i-Ready Diagnostic* accurately predict students' actual performance level on the 2013 New York State ELA and Mathematics tests?

The coefficients from the regression analyses were used to develop a formula to calculate the predicted NYS ELA and NYS Mathematics standard scores based on the *i-Ready* assessments. Comparisons were made between the actual performance/proficiency level the student received on the NYS test and their predicted level according to the *i-Ready Diagnostic*.

The comparisons show that from 95% to 99% (across grades) of actual NYS ELA and NYS Mathematics test scores were either predicted exactly at the same level as those that were actually achieved by the students or they were within one level. These impressive predictions provide further evidence of the predictive validity of the *i-Ready Diagnostic* overall scale score.

Conclusions

On the basis of this study, all three research questions can be answered positively.

1. *i-Ready Diagnostic* **is strongly correlated** to the New York State ELA and Mathematics tests administered to students in 2012 and 2013.
2. *i-Ready Diagnostic* **is a statistically significant predictor** of performance on the 2013 New York State ELA and Mathematics tests.
3. *i-Ready Diagnostic* **can accurately predict** students' actual performance level on the 2013 New York State ELA and Mathematics tests.