

1-1-2013

Predicting Proficiency on the Ohio Achievement Assessments Using I-Ready Diagnostic

Terra Ann Jones
tasenoj@aol.com

Follow this and additional works at: <http://mds.marshall.edu/etd>

 Part of the [Educational Assessment, Evaluation, and Research Commons](#), and the [School Psychology Commons](#)

Recommended Citation

Jones, Terra Ann, "Predicting Proficiency on the Ohio Achievement Assessments Using I-Ready Diagnostic" (2013). *Theses, Dissertations and Capstones*. Paper 477.

PREDICTING PROFICIENCY ON THE OHIO ACHIEVEMENT ASSESSMENTS USING I-
READY DIAGNOSTIC

A thesis submitted to
The Graduate College of
Marshall University

In partial fulfillment of
the requirements for the degree of
Education Specialist
in
School Psychology

by

Terra Ann Jones

Approved by

Sandra S. Stroebel, Ph.D., Committee Chairperson
Fred Jay Krieg, Ph.D.
Edna Meisel, Ed.D.

Marshall University

May 2013

DEDICATION

This study is dedicated to my wonderful family who stood by me through the entire process. I love you each with all of my heart!

CONTENTS

Dedication.....	iii
List of Figures.....	v
Abstract.....	vi
Chapter One.....	1
Core Areas of Reading.....	1
State Standardized Testing.....	2
Curriculum-Based Measures and Progress Monitoring.....	3
Predicting Test Scores.....	3
Ohio’s Plan for Reading Success.....	4
Statement of the Problem.....	7
Statement of Hypothesis.....	8
Chapter Two.....	9
Participants.....	9
Instruments.....	9
Procedures.....	11
Chapter Three.....	12
Chapter Four.....	14
References.....	16
Appendices.....	18

List of Figures

1. Third Grade Reading: Relationship between I-Ready and OAA
2. Calculation for Needed I-Ready Score to Predict Proficiency on the OAA

Abstract

Ohio's schools are held accountable for ensuring that students become proficient in reading by the end of third grade. Curriculum-based measures are often utilized to help monitor student progress toward proficiency goals and pinpoint those students who are at risk for falling below state standards on standardized tests. Using data from third grade students in a rural county in southern Ohio, this research determines what score on the I-Ready Diagnostic must be obtained in order to achieve proficiency on the Ohio Achievement Assessments (OAA) reading component. Data were compared and a Pearson Product Moment Correlation of 0.71 was determined. A Linear Regression was also conducted to produce a predictor equation. Results of this study projected that an I-Ready score of 477 (95% CI 445-509) would be necessary in order to achieve proficiency on the OAA for third graders.

Chapter One

Review of the Literature

The firm belief that all children should learn and be accounted for became the cornerstone for the 2002 No Child Left Behind Act. With this act came the mandate that holds schools accountable for student performance on statewide standardized achievement tests. Each state is required to administer a standardized test that is specially tailored to measure the content standards and objectives that are taught during the school year. Subject areas include reading, mathematics, language arts, and science. Scores on these assessments help identify schools which may need additional resources to help them meet state objectives (No Child Left Behind [NCLB], 2002).

Researchers have determined that reading scores by the end of third grade often predict academic outcomes in later life (O'Connor, Fulmer, Harty, & Bell, 2005). One recent study found that students who did not read proficiently by this critical time are four times more likely to drop out of high school than students who are proficient readers (a dropout rate of one in six). Furthermore, for those who have not mastered basic reading skills by the end of third grade, the dropout rates are nearly six times greater (Hernandez, 2011). For this reason, schools allocate a substantial amount of time and effort to ensure reading success for all students.

Core Areas of Reading

In order to help young readers meet their maximum potential, it is important that reading curriculum and instruction encompass certain core components. The National Reading Panel lists the five components of effective reading instruction as phonemic awareness, phonics, fluency, vocabulary, and reading comprehension (National Reading Panel, 2002). These areas of instruction should be the focus of all reading instruction in America's schools, and students who

master these skill areas should be considered proficient in reading. It is essential that these core reading components are not only at the foundation of every reading program but also that these skills are monitored frequently to ensure adequate skill development (Joshi, Binks, Graham, Ocker-Dean, Smith, & Boulware-Gooden, 2009).

State Standardized Testing

High stakes, standardized testing in schools is now mandatory with the issuance of the No Child Left Behind Act of 2002. For several decades, the desire to ensure academic success for students spurred the use of the first end of year standardized achievement tests as schools began using the results to gauge reading progress for individual students. Many states since the 1970s have also used test results as a guideline to deliver rewards and sanctions to teachers in our country based on their students' performances as a means to improve educational outcomes for students (Haertel & Herman, 2005). The reasoning behind this not-so-modern day initiative is that by providing negative consequences (i.e., school improvement plans, state take-over, public exposure) to schools with low achieving students, teachers and administrators will work more diligently to help students learn and become more successful (Nichols, Glass, & Berliner, 2012). Although this practice has been utilized for several decades, the passage of the No Child Left Behind Act mandated high-stakes testing for all states nationwide (NCLB, 2002).

Haertel and Herman (2005) best describe the current national policy on high stakes testing as "relying on testing to focus attention on valued learning outcomes by spurring greater effort on the part of administrators, teachers, and students" (p. 3). Results from testing also help parents become better informed about the quality of their child's school, assist in directing the allocation of educational resources and federal funding, and help identify students who may have fallen off track (Haertel & Herman, 2005).

Curriculum Based Measures and Progress Monitoring

Prevention and early intervention in reading have proven to be some of the most effective ways of ensuring that students succeed later in life (O'Connor et al., 2005). Because standardized testing is usually only done at the end of each year, many schools utilize other measures to aid in early identification of students with reading problems. Curriculum based measures have become one of the key elements in to this process. CBMs are time-friendly, simple methods of measuring progress toward long-term goals, they are useful in situations that require frequent monitoring, and they allow for a graphical depiction of student outcomes so that progress is easily observed (Stecker, Fuchs, & Fuchs, 2005). Teachers are able to monitor student learning and tailor instructional methods to best meet the specific needs of students (Fore III, Boon, Lawson, & Martin, 2007).

Predicting Test Scores

In a review of the literature on CBMs, researchers found that reading CBMs often predict scores on standardized state tests especially when they are both based on state content standards and objectives (Wayman, Wallace, Wiley, Ticha, and Espin, 2007). One study found that, for eighth grade students, administering a one to three minute CBM that employed a read aloud and/or cloze procedure adequately predicted the success or failure for these students on state testing with validity coefficients above .70 (Espin, Wallace, Lembke, Campbell, & Long, 2010). A similar study conducted with elementary school students also found reliable and valid results in predicting state standardized achievement test scores in reading (Shapiro, Keller, Lutz, Santoro, & Hintze, 2006).

The most common types of CBMs used to monitor reading goals are those that measure either oral reading fluency or those that employ a maze procedure in which students must choose

the best word to fit various blanks in a passage (Wayman et al., 2007). Although these measures are quick and easy to administer, they do not measure all five of the core components of reading as determined by the National Reading Panel. By using a more comprehensive measure of reading, schools are able to pinpoint specific areas of reading weakness to shape intervention strategies and goals.

Researchers suggest that CBMs may progressively change from the traditional methods to include more diagnostic approaches so that specific skills (the core components of reading) can be targeted with greater accuracy. It has also been proposed that the traditional one-on-one approach to CBM administration may also be replaced by computer-based programs that measure the progress of individual students with class-wide simultaneous administration (Stecker et al., 2005).

One such study was conducted in West Virginia using a diagnostic-type CBM to predict which students were at risk for failing the state high-stakes test and to project a minimum score needed on the CBM in order to pass the end of year test (Haught, 2010). This research followed a previous study done in Pennsylvania using the same diagnostic-type CBM (Northwest Evaluation Association [NWEA], 2009). These two studies determined the probability for passing the state test for a particular score on the CBM. They also determined what score would be necessary on the CBM for meeting proficiency standards on the state test (Haught, 2010; NWEA, 2009). By replicating these types of studies in other states, researchers could provide educators with concrete goals to work toward in the classroom.

Ohio's Plan for Reading Success

In an effort to be ahead of the game in education, Ohio schools have begun administering the Ohio Achievement Assessments, or OAA, once at the beginning of the school year for all

third graders in addition to the standard spring administration. The Third Grade Guarantee policy of Ohio's schools recommends that teachers and administrators determine which students should be targeted for reading interventions and strategies early in the school year in order to improve their reading scores by the spring OAA administration (Ohio Department of Education [DOE], n.d.).

The OAA is a criterion-referenced test used to measure Ohio's content standards that are supposed to be taught to students throughout the school year according to their grade level (Ohio DOE, 2012). Ohio third graders are required to have an OAA reading proficiency rate of 94.2% for the 2012-2013 school year in order to be on target for Adequate Yearly Progress, or AYP, as outlined in No Child Left Behind. By the 2013-2014 school year, 100% of third graders should be proficient by the end of the year, as measured by the OAA reading assessment, in order to meet state goals. As of the 2010-2011 school year, only approximately 79% of third graders scored proficiently on the end of year OAA. With the state's new mandatory retention policy for those students scoring lower than proficiency, schools and families are desperate to find a way for students to pass the statewide exam (Ohio Department of Education, 2013). For this reason, many school districts in the state are diligently working to find ways to predict which students are at-risk for scoring poorly on state testing so that they may be targeted for added instruction.

In order to make AYP and meet state goals, many school districts utilize a curriculum based measure, or reading diagnostic, in order to frequently monitor students' progress and to help pinpoint students who may require more intensive reading interventions in order to meet proficiency standards (Shapiro et al., 2006). A rural elementary school in Southern Ohio was the first in their district to employ a reading diagnostic titled I-Ready Diagnostic and Instruction in an effort to identify students who need additional reading supports and ultimately improve

reading scores on the OAA. The principal gathered information about various interventions and the school began using I-Ready at the beginning of the current school year (J. Shields, personal communication, February 23, 2013).

I-Ready was chosen due to its convenient all-in-one packaging of online diagnostic and progress monitoring coupled with interactive instruction that tailors itself to the needs of the students based on results of the diagnostic. The program is based on Ohio's Common Core standards and provides easy to read reports for individual students, whole classes, and the entire school (J. Shields, personal communication, February, 23, 2013). Progress monitoring can be done a minimum of three times per year or as often as once per week to chart reading progress in six main areas: Phonological Awareness, Phonics, High-Frequency Words, Vocabulary, Comprehension-Literature, and Comprehension-Informational Text (Curriculum Associates LLC, 2012). Students are individually assessed on the computer or the interactive Smartboard. Results help teachers pinpoint which students need to be targeted for more intensive instruction and to assist in monitoring progress toward academic goals (J. Shields, personal communication, February, 23, 2013). Because teachers are able to monitor student progress throughout the year, they are aware of which students may be at risk for not meeting reading proficiency standards on the OAA long before the final test is administered.

Educational Research Institute of America is a private company hired by Curriculum Associates LLC to conduct research on the effectiveness of I-Ready. The studies conducted by this company were focused on the instructional component of I-Ready and not the diagnostic or progress monitoring components, which are the focus of the present study. Five different case studies have been conducted using I-Ready Instruction by Educational Research Institute of America, but predicting scores on state standardized tests has not been the main focus. All five

studies showed growth and improvement after I-Ready Instruction was utilized in schools, according to an independent third-party data analysis. In the first study of grades Pre-K through fifth, the percentage of students on or above grade level increased from 11% to 24% in 14 weeks. In the second study using the same participants, I-Ready scores increased in all areas measured, with an overall average standard score of 467 at the end of the 14 weeks versus a baseline score of 441. Another study showed that after five months of using I-Ready Instruction, the school (grades Pre-K-third) exhibited an 87% growth in students on or above grade level. A fourth study showed an 88% recovery rate for fifth grade students who failed to meet their state's standards of learning the previous year. Finally, a study conducted in Ohio claimed that an average standard score increase of 37 points in students grades pre-K through fourth and a 20% increase in the national reading percentile rank; however, this study does not indicate how these results were measured (Educational Research Institute of America, 2012). Since, there is no documented research on the diagnostic portion of I-Ready, in particular its usefulness at predicting state test scores, it would be useful for a study of this nature to be conducted.

Statement of the Problem

With the issuance of the No Child Left Behind Act of 2002 came responsibilities of America's schools to ensure that all students become proficient in certain core subject areas. Meeting Adequate Yearly Progress standards can be a daunting task as schools search for ways to predict those students who are at risk for performing poorly on state standardized tests. Curriculum based measures and diagnostics such as I-Ready Diagnostic and Instruction can provide an effective means of progress monitoring students all school year long to help target those students who may be at risk for failing to meet state reading proficiency standards. By utilizing this type of measure, schools may also be able to pinpoint the specific reading skills

students need to gain in order to improve standardized test scores. These students may then receive the early interventions they need in order to become successful readers. Furthermore, finding a specific score on a reading CBM or diagnostic that predicts proficiency on state testing would prove even more useful by providing a goal for all students to meet in order to confidently master the end of year state reading test.

Although CBMs have been shown to predict scores on standardized end of year tests, new CBM measures designed by publishers need to be independently evaluated for effectiveness. I-Ready has been shown to guide instruction and result in improved academic performance; however, its effectiveness for predicting end-of-year performance on high stakes testing has not been demonstrated. This current study will evaluate I-Ready and its relationship to the Ohio Achievement Assessment reading test.

Statement of Hypothesis

The hypothesis states that there is a positive correlation between third grade reading scores on the I-Ready Diagnostic and proficiency on the Ohio Achievement Assessments reading test. In addition, descriptive data will be used to predict OAA scores based on I-Ready Diagnostic scores.

Chapter Two

Method

Participants

The participants in this study are 108 (45 female, 63 male) third grade students from a small, rural elementary school in Southern Ohio. Ninety-one were in regular education and 17 were in special education. Names are not associated with scores in order to maintain confidentiality. Ninety-five percent of students were Caucasian, and 56% were receiving free or reduced lunch.

Instruments

I-Ready Diagnostic. I-Ready Diagnostic was created in 2010 by Curriculum Associates, a company that designs research-based, online and print programs, assessment tools, and data management resources. The diagnostic is an online tool available for students in kindergarten through middle school. According to Curriculum Associates, I-Ready was designed with several specific purposes in mind: to establish a metric that can be used across the school year to accurately gauge student knowledge and monitor improvement over a period of time, to accurately measure knowledge for different content standards within each specific subject area, to provide information on which skills students have mastered and which they need more practice, and to link the diagnostic results to specific instructional advice found in I-Ready Instruction curricula (Curriculum Associates LLC, 2012).

I-Ready Diagnostic assesses several main skill areas in reading: Phonological Awareness, Phonics, High Frequency Words, Reading Comprehension, and Vocabulary. According to the technical manual, the diagnostic is considered a computer-adaptive test (CAT) in which items presented to each student vary depending on how the student responds to previous items, thereby

targeting the individual estimated student ability with more accuracy. After a student completes each item, the student's estimated ability level is recalculated, and the new level is used to determine the next best test item to deliver. When an item is missed, an easier item is presented; when an item is answered correctly, a more difficult item is presented (Curriculum Associates LLC, 2012).

The average number of items on the reading diagnostic is 72, and scores are scaled with a range of 100 to 800 for grades kindergarten to eighth. Third grade students who take the reading diagnostic are considered on grade level if their scores fall between 514 and 596 (Curriculum Associates LLC, 2012). Curriculum Associates recommends that students are given the I-Ready reading diagnostic at least every 12-13 weeks, or 3 times per year, although it can be given as often as desired.

Scores are generated on the computer, and a report is given for each student, classroom, and school. Teachers are provided with student results in each of the content areas and are given a list of skills each student needs to work on in order to meet proficiency standards on the specific state's Content Standards and Objectives (CSO's) (Curriculum Associates LLC, 2012). Teachers use the data gathered from I-Ready Diagnostics to tailor individual instruction for their students in order to help them succeed on standardized high stakes tests.

Ohio Achievement Assessments. The Ohio Achievement Assessments are a set of criterion-referenced tests created by the Ohio Department of Education. The OAA measures each of the core subject areas outlined by federal mandates which include: reading, mathematics, science, social studies, and writing. Each subject area is specifically aligned with Ohio's content standards and objectives, which teachers are required to use as guidelines for instruction throughout the school year. The test produces scaled scores that fall within five different ranges.

The performance level descriptors are: Advanced, Accelerated, Proficient, Basic, and Limited (high to low). A certain percentage of students must perform at or above the Proficient level in order for schools to achieve Adequate Yearly Progress (Ohio DOE, 2006).

In 2010, the Ohio Department of Education used a Cronbach's alpha or alpha coefficient to determine the OAA's test reliability, or consistency of scores, across repeated observations. Reliability coefficients range on a scale of 0 to 1 with coefficients closer to 1 signifying higher reliability. Coefficients at 0.80 or above are considered sufficiently reliable although higher coefficients of 0.90 may be preferred if significant consequences may occur from decisions based on results (Webb, Shavelson, & Haertel, 2006). Reliability statistics for the OAA show, for all grades, reliability coefficient for reading between 0.87 and 0.88, mathematics 0.87 and 0.90, and Science 0.87 and 0.88 (Writing and Social Studies were not assessed in 2010 when data was analyzed) (Ohio DOE, 2010).

Procedures

Students to participate in this study completed both the I-Ready diagnostic for Reading in September 2012 and the OAA Reading portion in October 2012. Tests were given by third grade teachers. Both scores from the OAA Reading portion and I-Ready Diagnostic were obtained from the building principal.

The data were analyzed using the Pearson Product Moment Correlation to see if there was a significant relationship between the variables. In addition, a Linear Regression was used to create a predictor equation to determine what score on I-Ready a student would need to obtain in order to pass the OAA Reading assessment. A confidence interval was also calculated as well as the Coefficient of Determination for the two sets of scores.

Chapter Three

Results

This research was implemented in order to determine if a correlation exists between the third grade reading portion of the Ohio Achievement Assessments and the I-Ready Diagnostic and also to establish a minimum score needed on the I-Ready Diagnostic in order to predict Proficiency level scores on the OAA. First, student identifying information was removed by the school district before being used in this research. Each student was coded with a number so that OAA and I-Ready scores could be matched up accordingly. A comparison of each student's reading score on the I-Ready Diagnostic was paired with their OAA reading score. A Pearson Product Moment Correlation, or Pearson r , was used to determine if a relationship exists between I-Ready Diagnostic test scores and OAA reading test scores. A strong correlation was found between these scores as evidenced by a Pearson r of 0.71, thereby indicating that scores on the I-Ready Diagnostic have a strong correlational relationship with scores on the OAA reading portion. The correlation is significant at the .01 level. See Figure 1 for a scatter plot of the data.

Next a Linear Regression was conducted to determine a predictor equation related to the sample data. This equation was then used to predict the I-Ready Diagnostic score needed in order to achieve Proficiency on the reading portion of the OAA. The needed OAA Proficiency score was substituted into the linear regression equation; then the I-Ready Diagnostic score was calculated using Algebraic techniques for solving a linear equation. It was determined that, based on the data collected, a score of 477 on the I-Ready Diagnostic would yield a score on the OAA reading portion that would meet proficiency standards. The corresponding 95% confidence interval would include scores between 445 and 509, indicating that scores in this range would be

necessary to predict a passing score on the OAA. See Figure 2 for the calculation of the needed I-Ready Diagnostic score.

Last, a Coefficient of Determination was produced to further analyze the data set. The Coefficient of Determination for the data is 0.5041 indicating that approximately 50.41% of the variance in OAA scores can be accounted for by the variance in the IReady scores.

Chapter Four

Discussion

The purpose of this study was to help schools identify third grade students who may be at risk for failing the Ohio Achievement Assessments reading section. Schools in America are held accountable for student achievement and are often penalized if a certain percentage of students do not pass the end of year state test (NCLB, 2002). Furthermore, schools in Ohio are now retaining third grade students who do not meet reading proficiency standards on the OAA as part of the new Third Grade Guarantee policy (Ohio ODE, 2013). By identifying students at risk for failing the state test, teachers are able to provide intensive instruction early in the school year in order to improve reading competency before the spring administration of the test. By using a curriculum based measure, such as I-Ready Diagnostic, schools are able to identify students who may be at risk for failing the state test, and also to monitor progress toward reading goals. In addition, by having a specific score needed on the I-Ready Diagnostic to obtain a proficient score on the OAA, schools would have a specific goal to work toward throughout the school year.

Results from this study produced two significant findings. First, a strong correlation was found for the I-Ready Diagnostic and the OAA reading portion as evidenced by a correlation coefficient of 0.71, which was significant to the 0.1 level. Second, using a Linear Regression to create a predictor equation, a minimum necessary I-Ready Diagnostic score was established in order to predict a proficient score on the OAA. Based on the data analysis, an I-Ready Diagnostic score of 477 (with a 95% confidence interval of 445-509) should successfully predict a passing score of 390 on the OAA. A Coefficient of Determination of 0.5041 indicates that approximately 50.41% of the variance in OAA scores can be accounted for by the variance in the I-Ready scores. These findings are consistent with the previous research by Haught (2010) who

also found a strong correlation between a reading diagnostic CBM and the state achievement test.

In conclusion, Ohio schools using the I-Ready Diagnostic may cautiously rely on these scores to help predict scores on the state end of year test. Additional studies are needed to confirm these correlations and also show the relationship between the I-Ready and the OAA given at the end of the year. These current findings are promising and may aid schools in making data-based decisions regarding reading intervention and targeting students who may need the most help in order to pass the OAA. By identifying such students early in the school year using I-Ready Diagnostic, schools are at a greater advantage for improving student progress far before they take the OAA.

Limitations of this study include using only one grade level in only one county in Ohio. Also, the student population lacked racial diversity as a very high rate of Caucasian students was used. Future studies should include a more diverse population and more grade levels. Other counties in Ohio who use I-Ready Diagnostic should also be included in future research. In addition, future studies should include a collection of data from each administration of the I-Ready Diagnostic throughout the school year to determine if there are any changes from one measure to the next. A comparison should be conducted between spring I-Ready Diagnostic scores and the spring OAA scores to determine if a correlation exists.

References

- Curriculum Associates, LLC. (2012). *I-Ready Diagnostic and Instruction*. Retrieved from <http://www.curriculumassociates.com/>
- Fore III, C., Boon, R., Lawson Sr., C., & Martin, C. (2007). Using curriculum based measurement for formative instructional decision making in basic mathematics skills. *Education, 128* (2), 324-332.
- Haertel, E., & Herman, J. (2005) A historical perspective on validity arguments for accountability testing. *National Center for Research on Evaluation, Standards, and Student Testing*. CSE Report 654.
- Haight, M. N. (2010). *Predicting mastery on the WESTEST 2: A comparison of MAP and WESTEST 2 data*. Master's thesis retrieved from Marshall University Electronic Theses and Dissertations.
- Hernandez, D. J. (2011). Double jeopardy: How third grade reading skills and poverty influence high school graduation. Annie E. Casey Foundation.
- Educational Research Institute of America: An affiliate of Beck Evaluation and Testing Associates, Inc. (2012). Retrieved from: http://www.casamples.com/downloads/i-Ready_Culpeper.pdf?source=diagnostic-instruction
- Espin, C., Wallace, T., Lembke, E., Campbell, H., & Long, J. D. (2010). Creating a progress-monitoring system in reading for middle school students: Tracking progress toward meeting high-stakes standards. *Learning Disabilities Research and Practice, 25* (2), 60-75.
- Joshi, R. M., Binks, E., Graham, L., Ocker-Dean, E., Smith, D. L., & Boulware-Gooden, R. (2009). Do textbooks used in university reading education courses conform to the instructional recommendations of the National Reading Panel? *Journal of Learning Disabilities, 42* (5), 458-463. doi: 10.1177/0022219409338739
- National Reading Panel. (2002). *Research based instruction in reading*. Paper presented at the Student Achievement and School Accountability Conference in Washington, DC. Retrieved from <http://www2.ed.gov/admins/lead/read/rb/edlite-slide002.html>
- Nichols, S. L., Glass, G. V., & Berliner, D. C. (2012). High-stakes testing and student achievement: Updated analyses with NAEP data. *Education Policy Analysis Archives, 20* (20).
- No Child Left Behind (NCLB) Act of 2002, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).

- Northwest Evaluation Association. *Measures of academic progress* (2009). Retrieved from <http://www.nwea.org>
- O'Connor, R. E., Fulmer, D., Harty, K., & Bell, K. M. (2005). Layers of reading intervention in kindergarten through third grade: Teaching and student outcomes. *Journal of Learning Disabilities, 38* (5), 440-455.
- Ohio Department of Education (n.d.). *Frequently asked questions for families about the Ohio Achievement Assessments*. Retrieved from <http://ohio3-8.success-ode-state-oh-us.info/faqs.aspx>
- Ohio Department of Education. (2006). Ohio achievement tests grades 3-8 performance level descriptors. *Center of Curriculum and Assessment*. Retrieved from <http://ohio3-8.success-ode-state-oh-us.info/resources.aspx>
- Ohio Department of Education (2010). Ohio achievement assessments: May 2010 administration statistical summary. *Office of Assessment*. Retrieved from: <http://www.education.ohio.gov/GD/.../DocumentDownload.aspx?...87656>
- Ohio Department of Education. (2012). Resources for Ohio Achievement Assessments. Retrieved from <http://education.ohio.gov/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=222&ContentID=19484&Content=136216>
- Ohio Department of Education. (2013). Local report card and accountability information. Retrieved from <http://education.ohio.gov/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=115&ContentID=16209&Content=141114>
- Shapiro, E. S., Keller, M. A., Lutz, J. G., Santoro, L. A., and Hintze, J. M. (2006). Curriculum-based measures and performance on state assessment and standardized tests: Reading and math performance in Pennsylvania. *Journal of Psychoeducational Assessment, 24*(1), 19-35. DOI: 10.1177/0734282905285237
- Stecker, P., Fuchs, L., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools, 42*(8), 795-819. doi:10.1002/pits.20113
- Wayman, M. M., Wallace, T., Wiley, H. I., Ticha, R., & Espin, C. A. (2007). Literature synthesis on curriculum based measurement in reading. *The Journal of Special Education, 40* (2), 85-120.
- Webb, N. M., Shavelson, R. J., & Haertel, E. H. (2006). Reliability coefficients and generalizability theory. *Handbook of Statistics, 26*, 4-44. DOI: 10.1016/S0169-7161(06)26004-8

Appendix

Figure 1

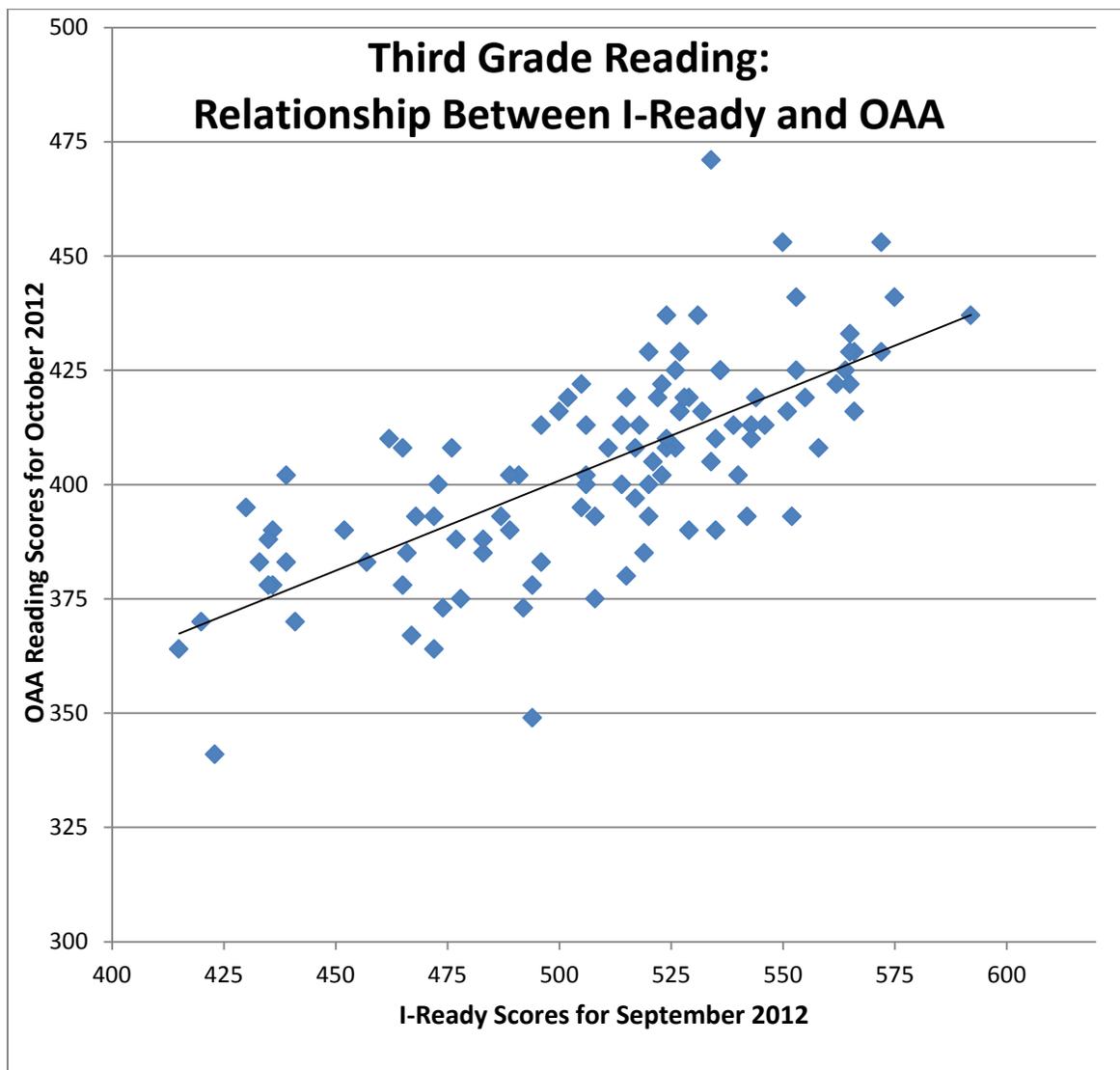


Figure 2

Calculation for Needed I-Ready Score to Predict Proficiency on the OAA

$$\text{Slope (b)} = 203.786092$$

$$\text{Y intercept (m)} = 0.3941792$$

$$\text{OAA passing score for third grade (Y)} = 390$$

$$\text{X} = \text{I-Ready score needed to pass the OAA}$$

$$Y = mx + b$$

$$390 = 0.39X + 203.79$$

$$390 - 203.79 = 0.39x$$

$$186.21 = 0.39x$$

$$186.21 / 0.39 = x$$

$$477 = x$$



Office of Research Integrity

April 11, 2013

Sandra S. Stroebel Ph.D. NCSP
Associate Professor/Program Director
School Psychology Program
Marshall University
100 Angus E. Peyton Drive
South Charleston, WV 25303-1600

Dear Dr. Stroebel:

This letter is in response to the submitted abstract for student Terra Jones to determine if there is a correlation between I-Ready Diagnostic and the Ohio Achievement Assessment reading portion by utilizing a Pearson product correlation. After assessing the abstract it has been deemed not to be human subject research and therefore exempt from oversight of the Marshall University Institutional Review Board (IRB). The Code of Federal Regulations (45CFR46) has set forth the criteria utilized in making this determination. Since the information in this study consists solely of deidentified data provided by the school district it is not human subject research and therefore not subject to Common Rule oversight. If there are any changes to the abstract you provided then you will need to resubmit that information for review and determination.

I appreciate your willingness to submit the abstract for determination. Please feel free to contact the Office of Research Integrity if you have any questions regarding future protocols that may require IRB review.

Sincerely,

A handwritten signature in blue ink that reads 'Bruce F. Day'.

Bruce F. Day, Th.D., CIP
Director
Office of Research Integrity

WE ARE... MARSHALL.

401 11th Street, Suite 1300 • Huntington, West Virginia 25701 • Tel 304/696-7320
A State University of West Virginia • An Affirmative Action/Equal Opportunity Employer