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Understanding Test Results

What Can You Learn from Test Results?

Taxpayers, parents, and educators ask many questions about instructional programs as Indiana strives to build a brighter future by providing the best possible education for its young people. Questions such as the following are commonly asked:

“Are all our students attaining the skills they need to succeed?”

“What kind of individual instruction would help my child?”

IREAD-3 provides information that will help you answer such questions and will support the instructional choices you make for your students. IREAD-3 reports can quickly show you the following:

- to what extent an individual student has mastered the Indiana Academic Standards in Reading.
- to what extent the students as a group—in your classroom, school, and corporation—are attaining mastery of the Academic Standards.
- where the students in your classroom, school, or corporation stand relative to the three performance levels established by the Indiana State Board of Education. (See page 2 for more information about performance levels.)

What Is a Criterion-Referenced Score?

IREAD-3 is a criterion-referenced test. It consists of items that assess a student’s performance with respect to particular criteria—in this case, to the Indiana Academic Standards established by the Indiana State Board of Education. The test does not provide norm-referenced information; that is, it does not compare the performance of Indiana students with that of students across the nation. Criterion-referenced scores indicate where a student stands in relation to the cut score, defined by educators, and based on Indiana Academic Standards. A student’s score is developed based on Item Response Theory (see below). The most valuable application of criterion-referenced information is to identify a student’s strengths and needs in order to plan appropriate instruction.

Item Response Theory

Item Response Theory (IRT) refers to the theory underlying a family of statistical models. These statistical models analyze the data obtained from test questions, or items. For the IREAD-3 test, two models are used. One is used for the one-point items, and another is used for the two-point items.

The two models are used in combination with test data to characterize items and generate student scale scores. Both models use the data to determine how difficult each item is and
how well each item distinguishes students who do and do not have the skill being tested by the item. The one-point model also describes the degree to which students can guess the correct answer to each item.

**Pattern Scoring**

The statistical characteristics of the items can affect a student's total test score (scale score). This is particularly true with IREAD-3 because it is pattern scored. Using the IRT model, pattern scoring incorporates item information, such as how difficult an item is for students to formulate a correct response. In contrast, raw scoring or number-correct scoring simply notes whether the student answered the item correctly. Both pattern scores and raw scores can be considered ability scores used to represent a student's ability level. To illustrate the differences between pattern scoring and raw scoring, consider two students, Student A and Student B, who both correctly answer 20 items. Student A answers the 20 most difficult items, while Student B answers the 20 easiest. With raw scoring, both students receive the same raw (ability) score, indicating both students have the same “ability,” and the highest raw score possible is equal to the total number of items on a test. In contrast, when the pattern of the items answered correctly is taken into account—that is, when the information about the difficulty of the items (among other item characteristics) is considered—Student A rightly receives a higher ability score.

**Scale Scores**

When ability scores are placed on a scale different from the raw score or number-correct scale, they are called “scale scores.” The ability scores are transformed and placed onto a scale, much like taking a degree of temperature on the Celsius scale and transforming it onto the Fahrenheit scale. How hot or cold the temperature is does not change. What does change is the scale used to describe the temperature. In the same way, ability scores can be described by different scales and still maintain their meaning as an indication of ability.

**Cut Scores and Performance Levels**

For IREAD-3, the test scale is divided into two performance levels using one cut score. The cut score is the score that separates two performance levels. Based on their IREAD-3 scale score, students are placed into one of two performance levels: Pass or Did Not Pass. For Indiana students, the cut score for the “Pass” performance level represents the point on the scale above which performance is considered proficient.

**Mean and Median Scores**

On IREAD-3 reports, summary information for a group (such as a class) is often presented using mean or median scores. The mean is the average score obtained by adding together
all scores in the group and dividing by the number of students in the group. The median is the middle score. (Fifty percent of the scores fall below it, and fifty percent fall above it.)

**Standard Deviation**

The standard deviation (SD) indicates the amount of variability in a group of scores. When scores are normally distributed (i.e., when they are part of a bell-shaped, “normal” curve), about two-thirds of the scores are within one SD above and below the average (mean) score, and about 95% of scores are within two SDs of the mean. In almost any shaped distribution, all scores will be within five SDs of the mean score.
The Testing Program for IREAD-3

Reports for IREAD-3

This guide will help you understand IREAD-3 test results and reports more clearly, and using those results, provide educational opportunities for students more effectively. Each IREAD-3 report is designed to clearly present the most useful information for you and for your discussions with parents, students, and other members of the educational community.

This guide provides educators with the purpose and intended audience for each report. The table below lists each available report.

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<thead>
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<tr>
<td>Student Data File</td>
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IREAD-3 Student Reports

Note: All sample reports shown in this guide contain only simulated student data.

IREAD-3 OnDemand Reports

The purpose of the OnDemand Reports (ODR) is to provide educators with student performance data on the IREAD-3 assessment. Teachers are provided with access to their assigned reporting group’s individual student performance levels and scale scores in reading. Authorized school-level users are provided with access to all students within the school, and authorized corporation-level users are provided access to all students within the corporation.

This report also provides the Undetermined status reason, if a student has a performance level of Undetermined. By selecting the Undetermined status (UND Status 1, 2, and 3) under the Manage Columns menu, the report will show each of the sections and the Undetermined reason for that section. Students who fail to complete one or more sections in reading receive a status of Undetermined.

An individual student preview can also be generated by selecting the information (i) next to each student’s name. This is the student’s ODR Student Report and is intended only for use by the student’s authorized educators. It should not be distributed to parents. Please see the section of this guide titled “IREAD-3 Individual Student Report” for information on reports for parents.

Note: The aggregated data are embargoed and can only be shared with teachers, parents, and students to whom it applies until notification of release is indicated by IDOE. (Aggregated data from these reports cannot be shared at local school board meetings. Staff may evaluate aggregate data for instructional decisions needed.)

The OnDemand Reports student roster can be printed or downloaded in a PDF, XLS, or CSV format by selecting the printer icon to the left of Manage Columns (letter F in the image shown on the next page).
Features of the *IREAD-3* OnDemand Reports

- **A** Indicates the Test Administration and Corporation or School.
- **B** Filters the data by Reporting Group.
- **C** Lists students according to the specified filtering criteria.
- **D** Produces the individual student preview by selecting the blue “Information” icon (ações).
- **E** Displays each student scale score and performance level within the Reading content area.
- **F** Adds or removes columns of information to be displayed in the OnDemand Reports.
- **G** Filters the data by Performance Level.

How Can OnDemand Reports Be Accessed?

Results are posted in PearsonAccess™. To access reports, use the following steps.

1. Select *IREAD-3 Spring 2018* from the administration drop-down menu.
2. Select the Reports tab, and then select OnDemand Reports.

Individual Student Performance by Strand

- To access the student’s OnDemand Student Report, as well as the student’s Performance by Strand, select the information icon (i) next to the student’s name.

- This OnDemand Student Report should not be distributed to parents; it is intended for use by authorized educators only. You may print this Student Report by selecting the small printer icon in the upper right corner.
IREAD-3 Student Data File

The purpose of the Student Data File is to provide a comprehensive file of student performance data on the IREAD-3 assessment to authorized school-level and corporation-level educators.


2. At the top of your screen, select Reporting Resources. Under Reporting Resources, select the Resources menu, and then select IREAD-3 Spring 2018 Student Data File Layout.
How Can the Student Data File Be Accessed?

Results are posted in PearsonAccessnext. To access reports, use the following steps.

1. Select *IREAD-3 Spring 2018* from the administration drop-down menu.

2. Select the *Reports* tab, and then select *Published Reports* (*IREAD-3 Student Data File* will appear on the list for the school or corporation when the Student Data File is released).
**IREAD-3 Individual Student Report**

The purpose of the *IREAD-3* Individual Student Report (ISR) is to clearly communicate student performance to parents. The report shows the student’s score and whether the student is placed in the Pass or Did Not Pass performance level, as established by the Indiana State Board of Education. Students whose scores place them in the Pass performance level meet the standards. The report also provides guidance to parents who may want to obtain more information or assist their child.

One paper copy of this report is provided to corporations (who distribute to schools). Schools provide this paper ISR to the parents of the student. A PDF version of the Student Report is also available through PearsonAccess” at [https://in.pearsonaccessnext.com](https://in.pearsonaccessnext.com). After sign in, go to Reports, select Published Reports, and then select the *IREAD-3* Student Report.

**Note:** The PDF version of the ISR is available approximately one week prior to paper ISR delivery to corporations. The PDF and paper copies of the ISR provide information for parents, whereas the OnDemand Student Report (as shown in the “OnDemand Reports” section) is not intended for distribution to parents.
Sample Individual Student Report

The sample Individual Student Report, as shown below, presents results for Karen M. Smith, a fictional student who took the IREAD-3 test. The report describes Karen’s foundational reading performance, and it shows her achievement as a three-digit scale score. The scale score required to pass is 446. Karen’s score of 516 means that she passed.
Features of the *IREAD-3* Individual Student Report

*(Individual Student Report is shown on page 11)*

A. Identifies the Student’s Name, Birth Date, Enrolled Grade, School Name, and Corporation Name.

B. Explains the student’s performance relative to the cut scores established by the Indiana State Board of Education.

C. Lists the strands (or topics) related to reading and shows the percent of points earned for each of Indiana’s grade 3 reading strands.

D. Lists resources to obtain more information about the *IREAD-3* assessment.
**IREAD-3 Label**

The *IREAD-3* Label presents an individual student's criterion-referenced test results in a form that school administrators can easily attach to the student's permanent record.

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<thead>
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<th>IREAD-3</th>
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<tr>
<td>STUDENT SCORE</td>
<td>516</td>
</tr>
<tr>
<td>PROFICIENCY LEVEL</td>
<td>PASS</td>
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</tbody>
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