Lexile® Measurement of Tests:

EIKEN & Test of English for Academic Purposes

OBJECTIVE

The purpose of this document is to report certified Lexile measures for the following reading tests administered in the years 2013 and 2014: EIKEN (reading sections only) and Test of English for Academic Purposes (TEAP) (reading sections only). The Eiken Foundation measured the complexity of these test forms using MetaMetrics' online Lexile® Analyzer and then sent the files to MetaMetrics for review. Due to differences in editing rules applied by MetaMetrics for certified text measures, the resulting text measures were not identical to those produced by the Eiken Foundation. However, the overall pattern of complexity across the test forms was maintained. The specific reasons for the differences are noted below.

WHAT IS THE LEXILE FRAMEWORK?

The Lexile Framework for Reading is a psychometric system for matching readers with texts of appropriate difficulty. With the Lexile Framework, both the reader and the text can be placed on the same measurement scale. A Lexile measure is the numeric representation of an individual's reading ability or a text's readability (or, difficulty), followed by an "L" (for Lexile). The Lexile scale is a developmental scale for reading that ranges from below 0L for emerging readers and beginning texts to above 1700L for advanced readers and texts. Values at or below 0L are reported as Beginning Reader (BR).

A Lexile text measure is obtained through analyzing the readability of a piece of text. The Lexile Analyzer®, a software program specially designed to evaluate the reading demand of text, analyzes the text's semantic and syntactic characteristics and assigns it a Lexile measure. A multi-step process is required to prepare the text before it is submitted to the Lexile Analyzer for a measure.

A Lexile reader measure is typically obtained by administering a test of reading comprehension to a reader. When a test has been linked with the Lexile Framework for Reading through a field study, a Lexile measure for the reader can be reported.

Extensive information about the development of the Lexile Framework for Reading can be found in the "Research and Publications" section of the Lexile website (www.Lexile.com). A white paper (Lennon & Burdick, 2004) entitled The Lexile Framework as an Approach for Reading Measurement and Success provides detailed descriptions of each component of the Lexile Framework for Reading.

PREVIOUS MEASURES

Figure 1, found on page 2, shows the Lexile measures for EIKEN (Grades 1 through 5) and Test of English for Academic Purposes (TEAP) tests as measured by the Eiken Foundation. The text files were then provided to MetaMetrics for certified text measurement.

TEXT PREPARATION

Before a reading test is submitted to the Lexile Analyzer, a text file must be created that preserves the punctuated English prose only. As part of the editing process to prepare a file for certified measurement, text features such as instructions, pagination, headings, speaker prompts in dialogue, sentence fragments, Uniform Resource Locators, telephone numbers, and vocabulary lists are removed.

Because reading comprehension tests utilize varied item formats, in some cases, prior to text measurement, reading items that require students to fill in a missing word in a sentence or to complete a sentence with the correct phrase must be completed. This is done by inserting one of the answer choices (1, 2, 3 or 4) into the appropriate location. The answer choices not selected are removed from the measured file.

Applying these guidelines to the files sent by the Eiken Foundation resulted in some differences between the text measures produced by the Eiken Foundation and those produced by MetaMetrics.

CERTIFIED LEXILE MEASURES

Table 1 shows the certified Lexile measures for the various test versions. The measures are organized by test, year, and version. Figure 2 is a bar graph patterned after the Eiken Foundation's bar graph (Figure 1) for ease of comparison. Figure 2, illustrates the smooth, gradual progression of complexity of the EIKEN Test from Grade 5 to Grade 1. While the 2014 TEAP test versions were most similar to the EIKEN Grade Pre 1.

Table 1: Certified Lexile Measures from MetaMetrics

Test	Year	Version 1 Lexile	Version 2 Lexile	Version 3 Lexile
TEAP	2014	1210L	1150L	1190L
Eiken Grade 1	2013	1360L	1290L	1320L
Eiken Grade 1	2014	1280L	1350L	1340L
Eiken Pre Grade 1	2014	1190L	1200L	1180L
Eiken Grade 2	2014	1020L	1000L	1020L
Eiken Pre Grade 2	2014	770L	780L	740L
Eiken Grade 3	2013	530L	560L	570L
Eiken Grade 3	2014	530L	540L	570L
Eiken Grade 4	2013	480L	520L	510L
Eiken Grade 4	2014	500L	460L	510L
Eiken Grade 5	2013	370L	310L	300L
Eiken Grade 5	2014	330L	310L	380L

Figure 1: Lexile measures from EIKEN measurement report.
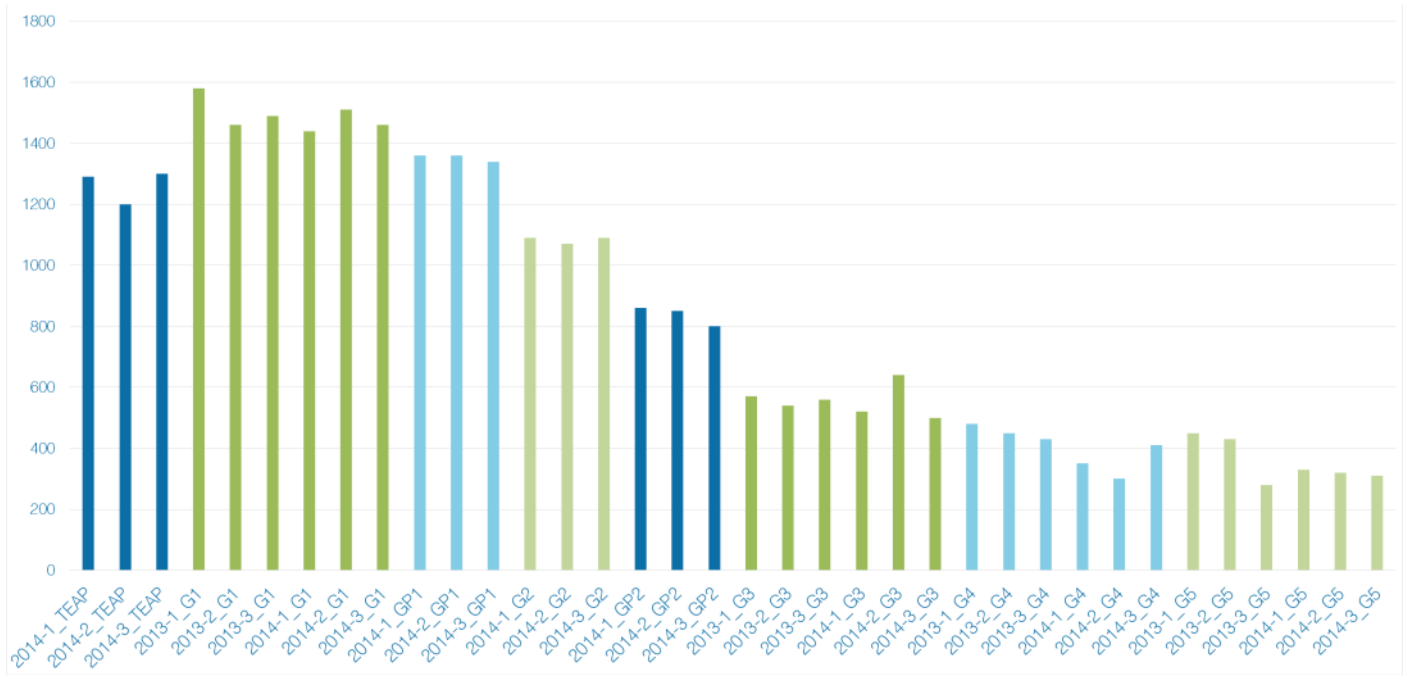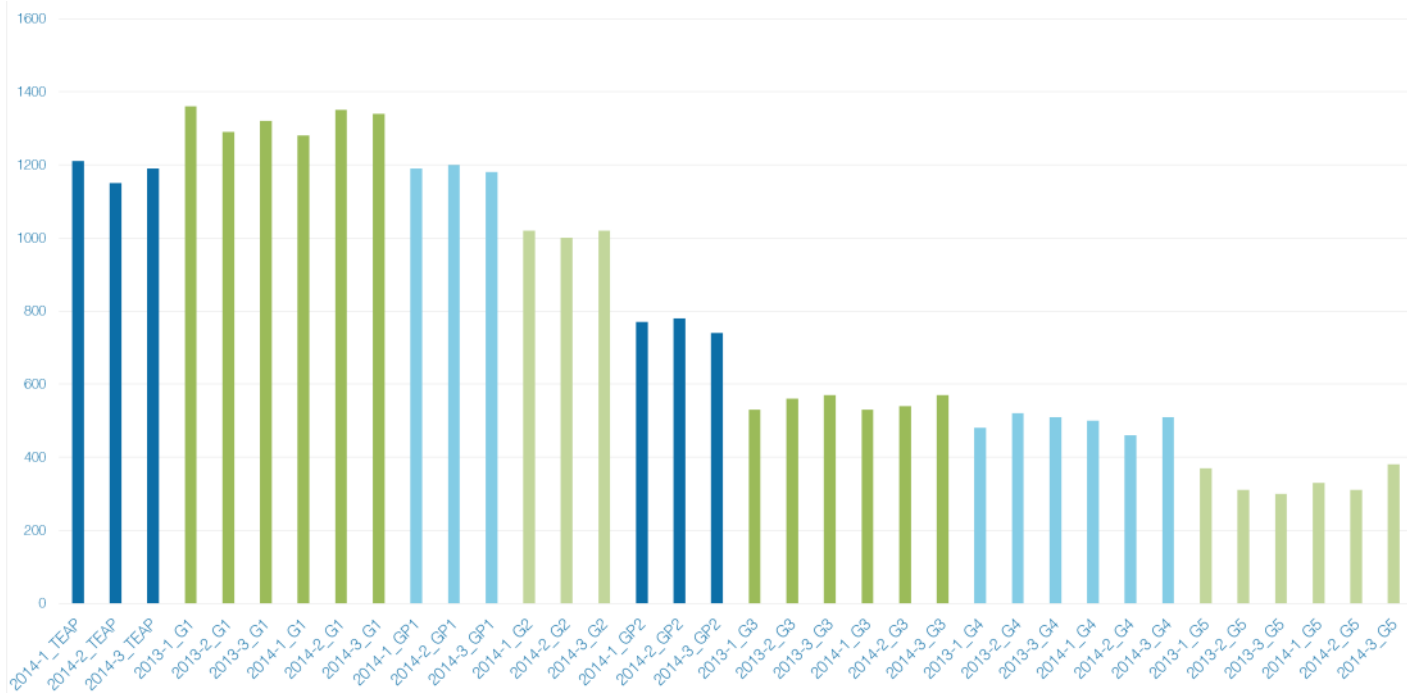

Figure 2: Certified Lexile measures from MetaMetrics.

CONCLUSION

MetaMetrics' text measurement process resulted in some changes in Lexile measure from the Eiken Foundation's initial estimates. Text files were modified to contain only prose and to follow other text measurement guidelines. Although the certified measures differed, the overall pattern of difficulty was maintained. The certified Lexile measures confirm the graduated complexity of the EIKEN reading tests.

MetaMetrics.

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