The Lexile® Framework for Reading: A System for Measuring Reader Ability and Text Complexity

A Guide for Educators
MetaMetrics®, Inc.

Reading Inventory™

PROFESSIONAL PAPER

The Lexile Framework for Reading provides a common scale for measuring text difficulty and student reading ability. As the most widely adopted reading measure in use today, the Lexile Framework offers a scientific approach that facilitates learning and instruction by improving interpretability and informing educational decisions and instructional strategies. Using Lexile measures, it is possible to match students with appropriate texts and track student reading growth over time using a common scale.

HMH *Reading Inventory* is a research-based, computer-adaptive reading comprehension assessment, developed in partnership with MetaMetrics, Inc., creators of the Lexile Framework® for Reading, the research-proven measure of reading ability and text difficulty. *Reading Inventory* is the first and only assessment that can be administered to individuals or to a group and that directly reports student reading levels using the native Lexile item format.

Reading Inventory is a foundational assessment component to *READ 180*®, *System 44*®, Expert 21™, HMH *Reading Counts*™, and *ReadAbout*®.

INTRODUCTION

Consider this: A father takes his son to the store to buy some shoes. The salesperson asks, "What kind of shoes do you need?" The father replies, "He needs basketball shoes." As the salesperson leads them to the basketball shoes, he asks, "How old is your son?" The father answers, "He is 12." So the salesperson points to five pairs of shoes on the wall and says, "There are our age 12 basketball shoes."

Not likely, right? We don't buy shoes by age; we buy them by size. A more accurate scenario would involve the salesperson using one of those magical silver devices (called a Brannock Device) to measure the boy's feet and then directing the father and son to shoes in the size that would best fit.

Traditionally, that is how we have matched students and books. We discover that a student likes science fiction books and is 9 years old or in fourth grade, and so she is given "fourth-grade science fiction" to read. What, however, if that fourth grader's reading ability is far higher than the "average" student her age? Or what if she has faced some challenges and, while she still loves science fiction, isn't quite ready for the books she is given to read? Like the boy's age 12 basketball shoes, the text simply doesn't fit the student.

Research has shown that readers make the most progress and develop lifelong reading enjoyment when they are given books that match their reading level instead of books that are too challenging, thus resulting in frustration.

The Lexile Framework for Reading (www.Lexile.com) provides a common scale for measuring reader ability and text complexity, allowing easy monitoring of student progress. Lexile measures give teachers and parents the confidence to choose materials that will improve student reading skills across the curriculum and at home. As a result, students read materials that are appropriately challenging, comprehend the content they are reading, and build stronger literacy skills.

How Does a Student Get a Lexile Measure?

HMH *Reading Inventory* is a research-based, computer-adaptive assessment for Grades K–12 that measures students' levels of reading comprehension and provides comprehensive, actionable reports to teachers and administrators using the Lexile Framework.

The proven success of the Lexile Framework for Reading, combined with the growth monitoring capabilities of *Reading Inventory*, enables teachers and administrators to find texts that present the correct demand.

By providing teachers and students with actionable, easy-to-understand reports, and accompanying these results with suggestions for level-appropriate reading material, the Lexile Framework and *Reading Inventory* bring assessment and instruction together to finally close the gap for struggling readers.

LEXILE MEASURES: AN OVERVIEW

How Lexile Measures Are Created

Historically, readers have relied on publishers to express text difficulty or age appropriateness using "grade equivalents" (where the measurement units are expressed in terms of the grade and month of school). However, those measures were often subjective or based on formulas that failed to reflect changes in the English language.

On the other hand, Lexile measures are based on an analysis of hundreds of millions of words as they have appeared in real text. A Lexile measure for a text reflects the difficulty of the words and the complexity of the sentences in that text. Word difficulty is a *semantic* component based on the frequency of words in the language. Sentence complexity is a *syntactic* component based on the length of sentences in a text. These two factors act together to produce a single Lexile measure for a text. Lexile measures are reported as a numeric value commonly between 200L and 1700L. Low values indicate easier-to-read texts, while higher values reflect more demanding text.

Lexile Measures: Most Widely Adopted Reading Measure

Lexile measures are the most widely adopted reading measure in use today. All major standardized reading tests and many popular instructional reading programs report student reading scores in Lexile measures. For example, the TerraNova, the Iowa Tests, the Stanford Achievement Test Series, and the Metropolitan Achievement Tests, among others, report student reading on the Lexile scale. Similarly, widely used interim assessments such as the *Reading Inventory* also report Lexile measures. Each year, tens of millions of students receive Lexile measures, and there are currently Lexile measures for more than 100,000 books and 80 million articles.

Lexile measures are an open standard. That means anyone with access to a computer and the Internet can easily find materials that have already been measured or can determine the Lexile measure for materials. (At www.Lexile.com, anyone can analyze text free of charge.) Consequently, the number of books and articles with Lexile measures grows every day.

How Lexile Measures Inform Instruction

Lexile measures are a highly useful tool for educators, allowing them to track student progress and assign each student appropriate reading materials. For example, if a text is too difficult for readers, they may struggle, quickly become frustrated, and give up. On the other hand, if the text is too easy, readers may not be challenged, and may become easily distracted or bored.

A unique benefit of Lexile measures is that they place students and texts on a common absolute scale. With Lexile-linked reading comprehension tests on one hand and Lexile-based book leveling and reading lists on the other, both assessments and instructional tools are calibrated in the same manner. In this way, Lexile measures link instruction with assessment—two worlds that in the past have been all too separate.

The common practice of matching students with texts based on grade levels drawn from standardized tests and traditional readability formulas can be inaccurate. Those instruments and formulas do not use a common, absolute scale to measure text readability or student reading ability. Lexile measures make test scores actionable for administrators, parents, and teachers. Using this tool, they know how well children read and which texts will best meet their learning needs.

Lexile Measures: A Common Language

Lexile measures provide teachers, administrators, students, and parents with an easy and exact way to understand and communicate reading ability regardless of where they happen to live and work, or what tests or text they happen to use. With this clear understanding comes newfound powers— the power to communicate with other educational stakeholders and the power to make informed decisions.

HOW LEXILE MEASURES WORK

Interpreting Lexile Measures

A Lexile measure (for either text or reader) is a number followed by an "L." The Lexile scale typically ranges from 200L to 1700L, although actual Lexile measures can be lower or higher. For example, a simple picture book might have a Lexile measure of 100L, while a college textbook might be measured at 1700L or higher.

Students' Lexile measures are the level at which they can read with moderate success (about 75 percent comprehension). When given books with Lexile measures slightly below their tested Lexile measure, students are likely to experience greater success; books with higher Lexile measures are likely to be challenging or even frustrating.

Growth in reading comprehension is easy to measure because the Lexile scale is an equal-interval scale, similar to inches when measuring height. Two inches of growth in height is twice as much as a one-inch increase in height. Growth on the Lexile scale is similar—a 200-point difference is twice as much as a difference of 100 points in terms of the amount of reading comprehension measured.

Lexile Measures and Grade Levels

Lexile measures do not directly translate to grade levels. That is because within any grade, there will be a range of both readers and reading materials. Some readers are far ahead of the average reader for that grade, and some are far below. Reading materials are usually chosen to correspond to this range in performance. Therefore, this range is the most useful area of focus.

Nevertheless, it is useful to consult a Lexile map that annotates the Lexile scale with reading materials that are typical in different grades. Usually, educational levels displayed on the Lexile map approximate the middle 50 percent of materials found in a typical grade-level classroom. Similarly, numerous studies with large numbers of students have observed reading levels for students in each grade (approximately the middle 50 percent of the students—the interquartile range).

The table below shows examples of the typical reader and text measures for various grades. Remember that about 50 percent of the students are reading higher or lower than these ranges.

Typical Reader and Text Measures

Grade	Reader Measures (Interquartile Range, Mid-Year)	Text Measures (from the Lexile Map)
1	Up to 300L	200L to 400L
2	140L to 500L	300L to 500L
3	330L to 700L	500L to 700L
4	445L to 810L	650L to 850L
5	565L to 910L	750L to 950L
6	665L to 1000L	850L to 1050L
7	735L to 1065L	950L to 1075L
8	805L to 1100L	1000L to 1100L
9	855L to 1165L	1050L to 1150L
10	905L to 1195L	1100L to 1200L
11 and 12	940L to 1210L	1100L to 1300L

Note: Text measures were derived from a study done in the late 1980s. The texts were comprised of small convenience samples of reading materials observed in classrooms in each grade, and represent general books that appeared in those classes in addition to textbooks. Results might differ if the study could be replicated today with a more exhaustive representation of textbooks and/or general reading materials.

The challenge for the typical teacher facing a heterogeneous classroom of readers is that there is often a gap between the abilities of the students and the required text. Armed with the information provided by Lexile measures, the teacher can overcome these differences, improving both reading skills and content area knowledge in the process.

Two Passages on the Same Topic With Different Lexile Measures

To illustrate how important it can be to target the reader with text of appropriate difficulty, it may be useful to consider two passages on the same topic that have different Lexile measures. The following two passages illustrate such a scenario. Each passage is followed by its Lexile measure in parentheses. The first passage is very easy to read and has a correspondingly low Lexile measure.

> Most people stay away from snakes. But not Jesus Rivas. He likes to follow them. He follows a snake called the anaconda. It is one of the biggest snakes in the world. Rivas takes the anaconda from the water. He studies it. Then Rivas puts the snake back. His job makes him a snake stalker. (280L)

The second passage is on the same topic but places a much higher demand on the reader, as evidenced by the higher Lexile measure.

> Everyone should stay focused at work, but if Jesus Rivas gets distracted for even a moment, he could be strangled by a 500-pound snake. Rivas, a biologist, is leading the first-ever study of anacondas in the wild. (1120L)

Knowing the Lexile measure of text in relationship to the Lexile measure of a student helps teachers choose reading material that will appropriately challenge the student without creating frustration.

USING LEXILE MEASURES AS AN ACTIONABLE TOOL

By incorporating Lexile measures into reading management systems, it is possible to remove much of the guesswork and inaccuracy inherent in traditional reading instruction strategies. Teachers now have more targeted options for measuring reading comprehension. Lexile measures can influence instructional decisions in numerous ways.

Different Lexile Measures for Different Circumstances

In general, teachers should assign texts at or below the student's Lexile measure when factors make the reading situation more challenging, threatening, or unfamiliar. They should use texts at or above the student's Lexile measure to stimulate challenge and growth—or when they will be adding support such as teaching background concepts, preteaching vocabulary, or facilitating postreading activities, such as reading discussion groups.

While students should be encouraged to move on to more demanding materials as their skills develop, it is not necessary for them to advance to a higher Lexile measure with each new book. By reading half a dozen or so titles within their reading range (50L above to 100L below their Lexile measure), young readers build reading comprehension before moving to the next level.

A Tool for Motivation

One thing that makes games fun is the instant feedback we receive, whether we've made the goal or won the point. In a similar way, Lexile measures are used to help motivate students to improve their reading abilities by giving them concrete goals to achieve.

Focus on the Overall Trend, Not the "Snapshot"

Lexile measures are particularly useful as a reading indicator when they're tracked over time to show an overall trend in a student's reading ability and to indicate what kind of reading program is appropriate for each student. Think of a Lexile measure for a student as a snapshot whose outcome depends on the day, the child's well-being, and concentration at that time. It is important not to focus exclusively on where students are now; attention must also be paid to where they're going.

USING LEXILE MEASURES AS AN ACTIONABLE TOOL CONTINUED

Track Progress on a Day-to-Day Basis

Lexile measures can tie day-to-day classwork to critical high-stakes tests, which also report scores in Lexile measures. This commonality allows teachers to provide interim assessment and feedback while using the same consistent measurement. Lexile measures help teachers set measurable goals, monitor and evaluate reading programs, and easily track progress without additional testing.

Apply Lexile Measures Across the Curriculum

More than 450 publishers provide Lexile measures for their titles, enabling teachers to match student reading ability to text across the curriculum. Using students' Lexile measures, teachers can connect them to more than 100,000 books and 80 million articles (available at www.Lexile.com) that have Lexile measures.

Easily Communicate With Families

Lexile measures provide a clear, nonjudgmental way of communicating a student's reading ability to parents. They allow teachers to generate reading lists that help parents guide their children to appropriately challenging reading materials. Lexile measures are also used to promote summer reading and to select books that will provide easily understood information for homework assignments.

An Indicator, Not a Solution

Just as a thermometer won't cure your cold, Lexile measures will not cure a student's reading problems. Lexile measures are most valuable in the hands of educators and parents who know how to evaluate and use the information these measures provide and who create an environment that fosters each student's literacy development.

READ FOR LIFE: DEVELOPING READING SKILLS IN MIDDLE AND HIGH SCHOOL

The National Association of State Boards of Education report *Reading at Risk: The State Response to the Crisis in Adolescent Literacy (*2006*)*, stresses that improving literacy is the key to raising student achievement. The literacy skills students acquire throughout their schooling not only make them competent students but will be vital to make them productive members of society and, ultimately, successful in life.

Research shows that strong literacy skills are needed throughout a student's education, including middle and high school. This is when content-area teachers in subject areas such as language arts, science, and history are vital to the development of literacy skills as textbooks and other materials that students use become more complex. For success, it is imperative in middle and high school to continue to build the academic vocabulary and comprehension skills of every student.
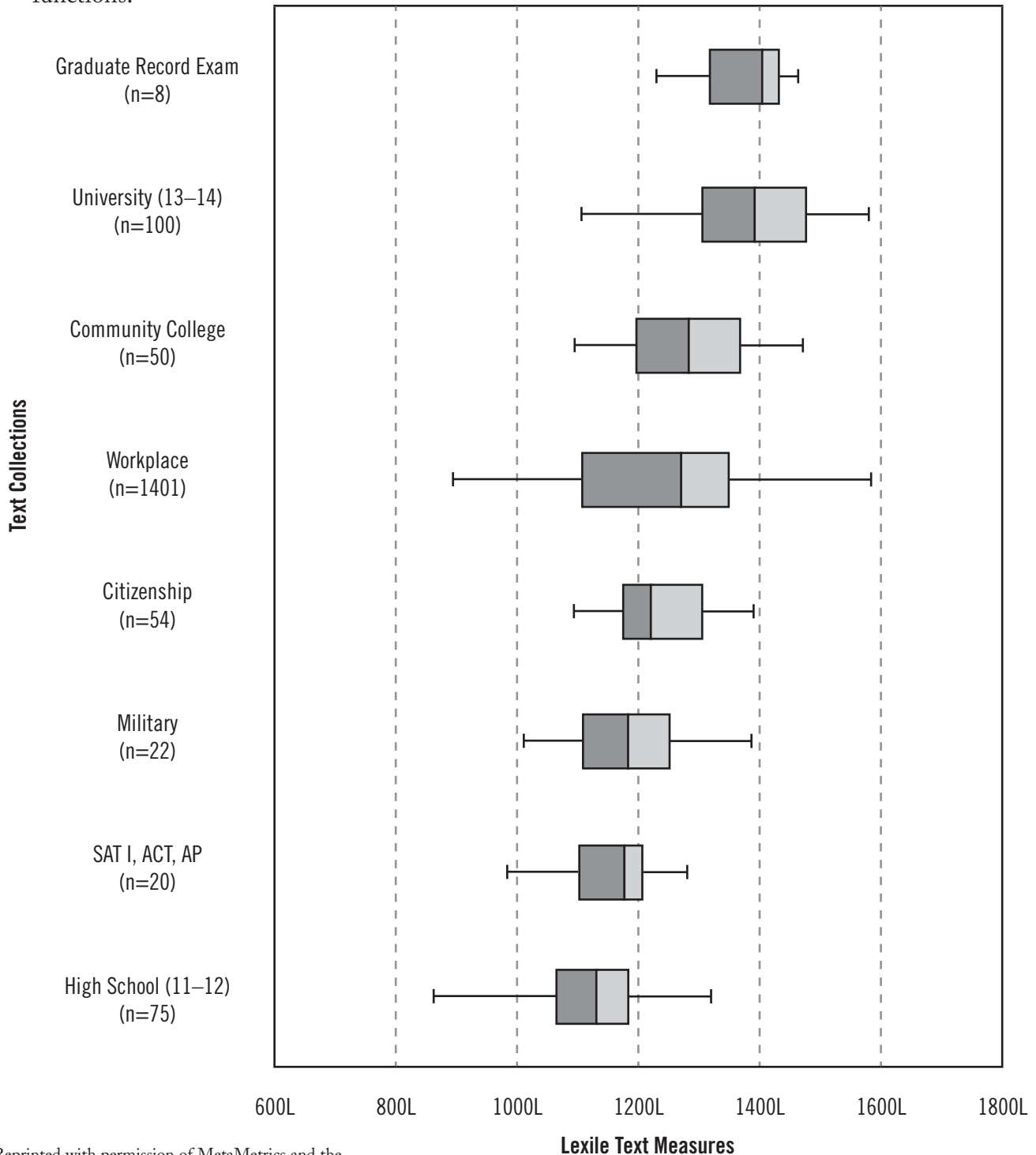
To put it another way, if there is a gap between students' reading ability and the requirements of either college or the workforce, then students will be unprepared to graduate high school and move on to become productive and successful in whatever it is they choose to do. However, to ascertain whether the gap is purely an ability gap or whether there is also a textual gap requires that both ability and textual difficulty be measured. Doing this necessitates a method that places both text and student ability on the same scale.

Using *Reading Inventory* and the Lexile Framework for Reading places both reader and text on the same scale, making it possible to define gaps between a reader's comprehension and the various types of text that members of society need to understand in order to productively go about their daily lives.

DEVELOPING CAREER COLLEGE READINESS FOR POSTSECONDARY OPTIONS
(Williamson, 2004; ICLE)

The chart below graphically displays what levels of reading comprehension are required to succeed in various professions based on the reading materials involved in performing job functions.

Text Collections

Graduate Record Exam (n=8)

University (13–14) (n=100)

Community College (n=50)

Workplace (n=1401)

Citizenship (n=54)

Military (n=22)

SAT I, ACT, AP (n=20)

High School (11–12) (n=75)

600L 800L 1000L 1200L 1400L 1600L 1800L

Lexile Text Measures

APPENDIX A:
FREQUENTLY ASKED QUESTIONS

Q: **How do Lexile measures evaluate the semantic difficulty of a text?**

A: Lexile measures judge the frequency of a word—how often a reader can expect to encounter that word in text. Even a long word like "television" can be easy to read if seen often enough, whereas a four-letter, one-syllable word like "ague," which is almost never seen, is likely to send the reader to the dictionary. Accordingly, Lexile measures evaluate the semantic difficulty of words by their frequency in standard written text.

Q: **How do Lexile measures evaluate the syntactic complexity of a text?**

A: Researchers have found that the length of a sentence is a good indicator of how hard it is to read. Longer sentences take longer to read and require more concentration to understand. The longer a sentence is, the more likely it is to contain multiple phrases and clauses, which will require the reader to comprehend a number of ideas as well as the relationship between them.

Q: **How is a Lexile measure assigned to reading material?**

A: To assign a Lexile measure to reading material, researchers scan the complete reading material into a computer and then run a program called the Lexile Analyzer® to measure its semantic difficulty and syntactic complexity. These two factors are combined to calculate a Lexile measure for the text.

Q: **Should a student's Lexile measure exactly match a text's Lexile measure?**

A: A student's Lexile measure is set at the level of text the student can be expected to read with 75 percent comprehension; it corresponds to an instructional reading level for the student. This means the student's Lexile measure marks a point in a reading range and then extends about 50L above to 100L below it.

APPENDIX A:

FREQUENTLY ASKED QUESTIONS CONTINUED

Q: Is Lexile measure the only factor to consider when assigning texts?

A: Lexile measures do not address the following factors, all of which should be taken into account when selecting a text suitable for a particular student:

- Student interest (or lack thereof) in the topic addressed by the text will motivate (or inhibit) student effort to decipher the text.

- Age appropriateness of the topic for the student—the text should be neither too "young" nor too "mature" for the age level of the student.

- Text support, including features such as illustrations, size of type, captions, and sidebars, which can greatly aid student comprehension of a text.

- Quality of text, including its size, weight, construction, and aesthetic appeal.

Lexile measures are measures of text difficulty, or readability. They cannot determine the literary or informational content of a text.

Q: Are there books that cannot be assigned a Lexile measure?

A: There are certain types of text that cannot be assigned a Lexile measure because they are not prose. These include poems and plays. Additionally, for books below 100L, Scholastic Inc. does not provide a Lexile text measure because such books rely heavily on illustrations, rhyme, rhythm, repetition, etc. These access features are not accounted for in the Lexile Framework and therefore are given the designation of Beginner Reader (BR).

Additional References:

National Association of State Boards of Education. (2006). *Reading at risk: The state response to the crisis of adolescent literacy. The report of the NASBE study group on middle and high school literacy* (Rev. ed.). Arlington, VA: Author.

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