

International Lexile Study **2014-2015**



ACHIEVE3000[®]

The Leader in Differentiated Instruction

2014-2015 International Lexile Study

Number of Countries:	24
Number of Schools:	81
Number of Students:	9,562

About Achieve3000®

Achieve3000 is the leader in online differentiated instruction, serving over two million students worldwide. Based on decades of scientific research, Achieve3000's cloud-based solutions reach both students and adult learners at their individual reading levels to accelerate their learning, improve standardized test performance, and prepare them for university and career success.

Achieve3000's solutions also extend educators' reach without increasing workloads or time demands. By combining embedded assessment, differentiated instruction, regular skills practice, and targeted scaffolds in a single program, Achieve3000's solutions empower educators to move their students up surely and steadily, level by level.

The solutions examined in this study – KidBiz3000® (grades 2-5), TeenBiz3000® (grades 6-8), and Empower3000™ (grades 9-12) – are powered by a patented methodology that delivers age-appropriate lessons to the entire class and simultaneously tailors them according to each student's Lexile® reading level. They have been proven to accelerate reading comprehension, fluency, writing proficiency, and vocabulary development.

The Assessment Measure

Achieve3000's proprietary assessment, LevelSet™, is the world's only universal screener for reading comprehension of nonfiction text in both English and Spanish. Developed by Achieve3000 in conjunction with MetaMetrics®, the LevelSet assessment identifies each student's precise Lexile® reading level and thus is a reliable means of matching students to informational text.

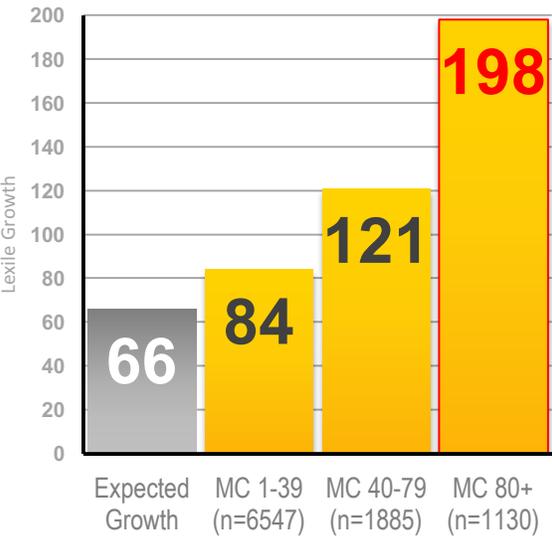
The result of more than 20 years of ongoing research, MetaMetrics' Lexile Framework for Reading is a scientific approach to reading and text measurement that has become the most widely adopted reading measure in use today. A key advantage of the Lexile Framework is that it measures both text complexity and reader ability using the same scale. This means that the ability to comprehend and the material being comprehended are evaluated using the same criteria.

The LevelSet assessment can be administered up to three times a year – a pre-test at the beginning of the school year, an interim test at the middle of the school year, and a post-test at the end of the school year to measure student progress and provide a summative measurement of student growth.



Executive Summary

International Lexile Growth



3X the expected reading gains for international students with regular program use¹

The number of reading activities that a student completes with Achieve3000 is a statistically significant predictor of his or her Lexile performance growth, on average.² **International students using the program with suggested frequency (i.e., an average of two or more times per week) exceeded their expected Lexile growth by an average of 132 points.**

Key Findings

- On average, international students using the program with suggested frequency (i.e., completing at least two reading activities per week, on average) achieved three times the Lexile growth expected with typical instruction.
- International students who completed at least two Thought Questions per week, on average, made the greatest Lexile growth: more than three and a half times the expected growth norms.

¹ Regular use is defined as a minimum of two reading activities per week, on average, throughout the school year. Achieve3000 solutions are designed to be used with this frequency.

² $F(2, 9559) = 315.1, p < 0.0001$

Methodology

Lexile Measurement of Reading Growth

To determine the effects of Achieve3000's solutions on the literacy development of students, Achieve3000 designed a study that measured student Lexile growth using the LevelSet data. The LevelSet assessment, developed in partnership with MetaMetrics, provides a Lexile measure for each student.

Sample

This report relies on internal Achieve3000 usage and Lexile data. The sample includes 9,562 international students in grades 2 through 12 during the 2014-15 school year. Students were included in this analysis if they completed LevelSet assessments at the beginning and end of the school year. Post-test Lexile scores at the end of the year were based on the final adjusted score a student received within the program. Students also had to have a minimum level of engagement with the program, thus students had to log in one or more times during this school year as well as complete at least one multiple-choice activity. Additionally, a small number of students exhibited erroneous scores on the end-of-year LevelSet and were excluded.

Expected Lexile Growth

The actual growth achieved was compared to the expected yearly growth based on MetaMetrics' proprietary calculation. Using MetaMetrics' findings on expected yearly growth, Achieve3000 calculated the expected Lexile growth for each student. This calculation was based on the length of time from the student's pre-test to post-test as well as the student's initial reading level. Achieve3000 first used MetaMetrics' expected growth norms to calculate the expected yearly growth for a student at that reading level. Achieve3000 then divided the expected yearly growth by the number of days the student used the program to arrive at an "expected Lexile growth" score for each student.

The average "expected growth" scores are specific to each mix of students included in the analysis. These are not norm-referenced growth expectations for grade levels or groups of students.

Multiple-Choice Usage Analyses

Achieve3000 researchers measured the impact of Achieve3000 usage based on the number of multiple-choice activities completed by each student. A multiple-choice activity is completed at the end of each reading activity, so this number provides a measure of how extensively a student engaged with our solutions.

To measure the impact, students were assigned into three groups based on the number of multiple-choice activities they completed: 1 to 39 activities, 40 to 79 activities, or 80 or more activities. Achieve3000 researchers then conducted an analysis of variance (ANOVA) to determine if these three groups performed differently from one another to a statistically significant degree in terms of their Lexile scores (we consider a $p < 0.05$ as statistically significant).

Quality Usage & University and Career Analyses

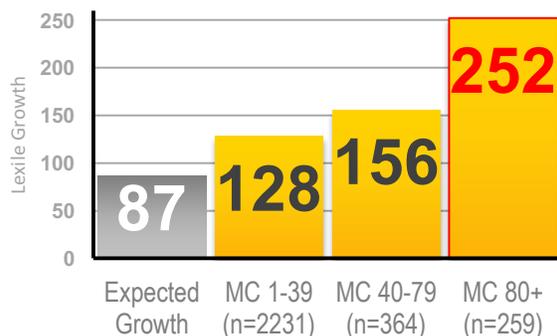
Achieve3000 researchers determined quality usage by dividing students into two groups – those who scored 75% or greater on their first tries, and those who scored below 75%. Students who average 75% or greater on multiple-choice activities are identified as working within their instructional zone and therefore applying themselves to their work. Achieve3000 researchers then conducted a t-test to determine if students in the 75% or greater group performed differently from MetaMetrics' expectations to a statistically significant degree in terms of their Lexile scores (we consider a $p < 0.05$ as statistically significant).

For the university- and career-ready analysis, students were identified as being on track for university and career success at each grade level if they surpassed a specific threshold based on research by MetaMetrics. Achieve3000 researchers then determined if the percent of students university- and career-ready from the pre-test to the post-test changed to a statistically significant degree by performing a chi-square test (we consider a $p < 0.05$ as statistically significant).

Performance by School Type

At all school levels (elementary/primary, middle/lower secondary, and high/higher secondary), the number of reading activities that an international student completes with Achieve3000 is a statistically significant predictor of his or her Lexile performance growth, on average.³

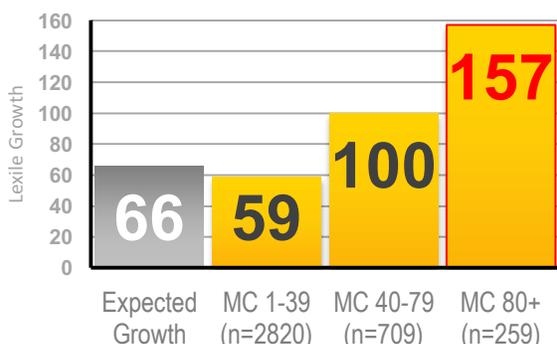
Elementary School Lexile Growth by Frequency of Program Use



Nearly 3X the expected reading growth for international elementary school students, with regular program use

International elementary school students using the program with suggested frequency **exceeded their expected Lexile growth by an average of 165 points.**

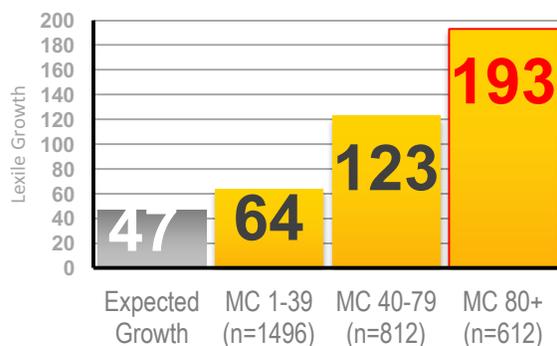
Middle School Lexile Growth by Frequency of Program Use



Over 2X the expected reading growth for international middle school students, with regular program use

International middle school students using the program with suggested frequency **exceeded their expected Lexile growth by an average of 91 points.**

High School Lexile Growth by Frequency of Program Use



Over 4X the expected reading growth for international high school students, with regular program use

International high school students using the program with suggested frequency **exceeded their expected Lexile growth by an average of 146 points.**

³ Elementary school: $F(2, 2851) = 58.6, p < 0.0001$

Middle school: $F(2, 3785) = 134.9, p < 0.0001$

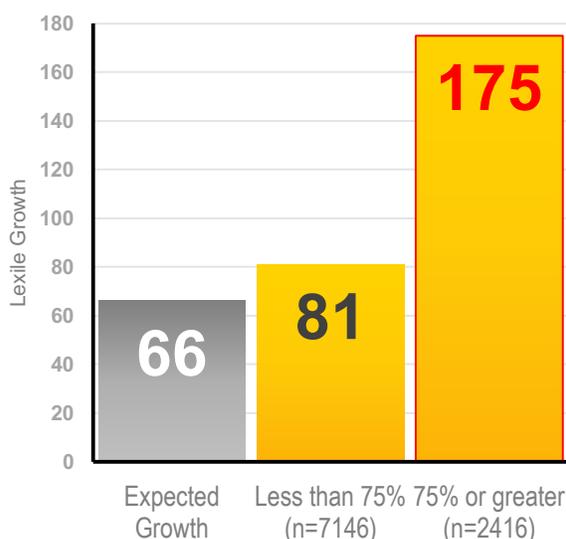
High school: $F(2, 2917) = 171, p < 0.0001$

Effect of Quality of Program Use on Lexile Gains

Reading Activity Scores

In addition to analyzing the frequency of use, Achieve3000 researchers also analyzed the quality of program use. The Multiple-Choice Activity is a critical component of the Five-Step Literacy Routine and a simple indicator of the degree to which students are applying themselves in the program. This formative assessment allows educators to monitor their students' overall understanding of the text read. Students who score 75% or higher on the multiple-choice activity on their first try are identified as working within their instructional zone. In other words, scores within this range typically indicate that students are reading at a level that fosters their literacy development.

Lexile Growth Related to Quality of Program Use



Over 2.5X the expected reading growth for international students working within their instructional zone

International students scoring within their instructional zone (75% or greater on average) exceeded their expected Lexile gains by an average of 109 points.⁴

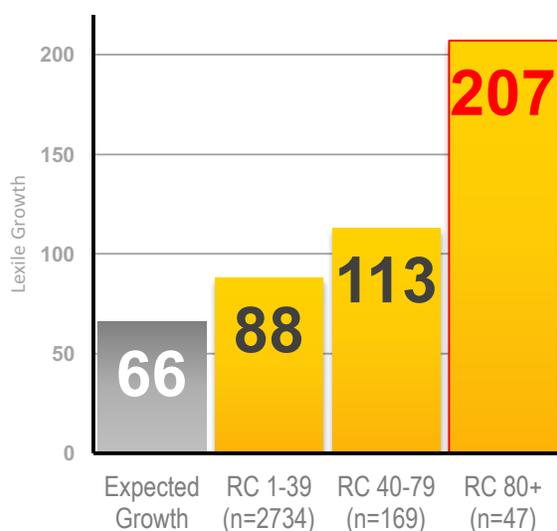
⁴ This difference is statistically significant, $t(2414) = 33.2, p < 0.0001$.

Reading Connections

Explicit Reading Comprehension Strategy Instruction and Application

Achieve3000 provides explicit instruction on the key comprehension strategies for informational texts. Two features of the program, the Lesson Plans and the Reading Connections, help address this need. Lesson Plans that guide the teacher in providing this direct, explicit instruction are available within the Learning Center, and one Lesson Plan is always attached to the daily article. Within each article, students are encouraged to apply the strategies of summarization, generating questions, and setting the purpose by using the Reading Connections prompts embedded in the article.

Lexile Growth Related to Reading Connections



Over 3X the expected reading growth for international students completing an average of two or more Reading Connections per week

The number of Reading Connections that an international student completes with Achieve3000 is a statistically significant predictor of his or her Lexile performance growth, on average.⁵ Students completing 80 or more Reading Connections during the course of the school year **exceeded their expected Lexile growth by 141 points, on average.**

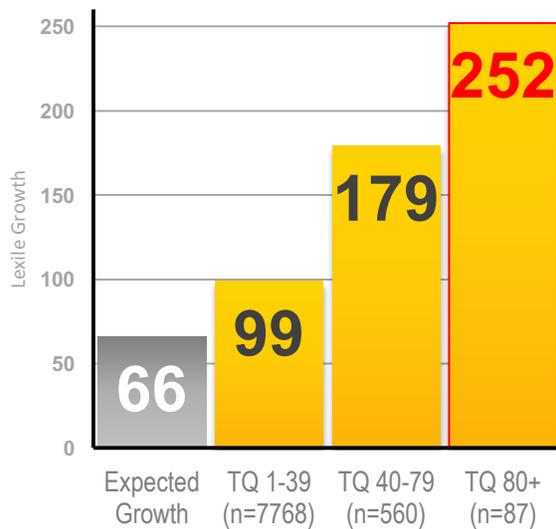
⁵ $F(2, 2947) = 21.5, p < 0.0001$

Thought Questions

The Reading-Writing Connection

The Thought Question is the fifth step in the Five-Step Literacy Routine and purposefully engages students in a formal writing process that allows them to apply knowledge they have acquired and express their thoughts through writing. Students respond to prompts in three key genres, with an emphasis on persuasive/argument writing, using academic vocabulary to ensure that they are prepared to read, write, and speak effectively in all content-area courses.

Lexile Growth Related to Thought Questions



Over 3.5X the expected reading growth for international students completing an average of two or more Thought Questions per week

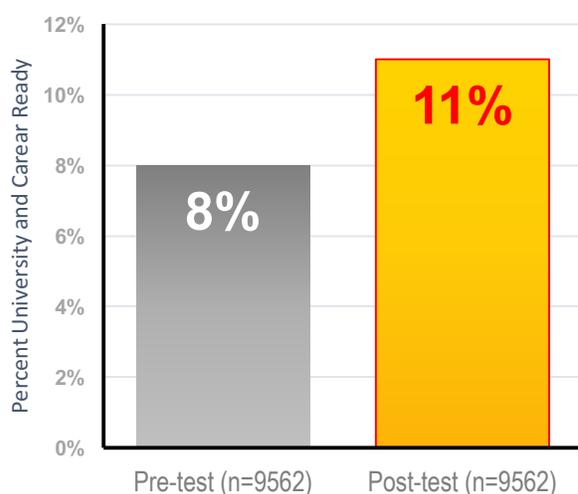
The number of Thought Questions that an international student completes with Achieve3000 is a statistically significant predictor of his or her Lexile performance growth, on average.⁶ Students completing 80 or more Thought Questions during the course of the school year **exceeded their expected Lexile growth by an average of 186 points.**

⁶ $F(2, 8412) = 114.4, p < 0.0001$

University and Career Readiness

Achieve3000's University and Career Report supports the current emphasis on University and Workforce Readiness and the need to prepare students for an increasingly competitive global economy by describing students' readiness for university and career based on their current Lexile reading level. Research demonstrates that giving educators and administrators access to relevant student data allows them to be more targeted in their instruction and translates to better student performance on standardized tests.⁷ After reviewing the University and Career Report, educators can maximize Achieve3000's differentiated instruction by offering students the targeted intervention they need to be successful.

Growth in University and Career Readiness



38% increase in University and Career Readiness, with 1,052 students reaching these benchmarks by the end of the year

A higher percentage of international students are on track for university and career readiness after used an Achieve3000 solution during the 2014-15 school year.⁸

University and career readiness initiatives require increased rigor in reading performance, which translates into higher Lexile level requirements at every age level. As schools implement these new initiatives and work to better prepare students for university and careers, educators are facing new challenges in helping students reach the “on-track” reading levels necessary for success.

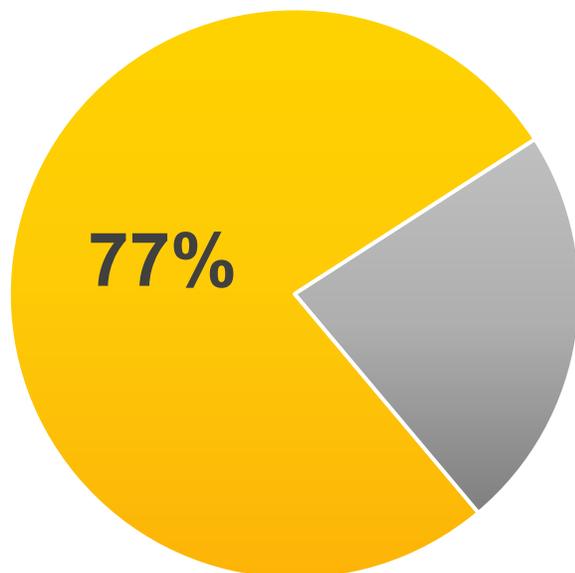
⁷ Lewis, D., Madison-Harris, R., Muoneke, A., & Times, C. (Fall/Winter, 2010). Using data to guide instruction and improve student learning. (SEDL letter, Vol. XXII, No. 2). Austin, TX: SEDL.

⁸ $\chi^2(1) = 3979.1, p < 0.0001$

After-School Usage

Research on adolescent literacy suggests that the amount of reading students do during out-of-school hours is an accurate predictor of their in-school academic achievement.⁹ If after-school programs can motivate young people to read more and explore their interests through reading, research suggests that their academic performance will improve.

International After-School Usage



77% of international Achieve3000 students logged in after school hours

7,376 students logged in 134,267 times after school during the school year.

⁹ MetLife Foundation Afterschool Alert. (2011, November). *Literacy in afterschool: An essential building block for learning and development* (Issue Brief No. 53). Washington, DC: Author.



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**To learn more about Achieve3000's
proven solutions, please visit**

www.achieve3000.com

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