

National Geographic School Publishing Assessments:

English Language Gains Test for English Learners

2007–2009



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EXECUTIVE SUMMARY

Background and Purpose

The English Language Gains Test, published by National Geographic School Publishing, is a research-based, scientifically valid, reliable, and fair measure of adolescents' English language proficiency. The English Language Gains Test was carefully developed by experts, field-tested for accuracy, and rigorously evaluated by third-party researchers to ensure adherence to the highest standards of quality for student assessment. This summary is intended to support educators in their understanding of the test's purpose, its use with students, and the interpretation of test results.

English language learners comprise one of the fastest-growing student groups in the United States. In 2009, the U.S. Department of Education estimated the number of English language learners at over five million, representing approximately ten percent of all K–12 students. Effective instruction of this student population requires accurate and frequent assessment of student skills including initial evaluation (screening) of language proficiency, periodic assessment of growth, and summative testing at the conclusion of an instructional period to measure overall gains in English acquisition and proficiency.

State standardized English language proficiency assessments (e.g., ACCESS, CELDT, etc.) are administered yearly according to each state's schedule, and test results are often not provided to districts until many months later. The periodic review of students' progress toward target Annual Measurable Achievement Objectives (AMAOs), such as English language acquisition or proficiency, is most powerful when multiple data sources are available to inform instructional decisions. Unfortunately, students' progress against targets, as well as class placement decisions, often must be made using language proficiency data that was collected many months earlier. Educators need a viable assessment tool to monitor their students' progress in English language proficiency and support more informed decision-making between administrations of high-stakes standardized language proficiency assessments.

To meet this need, National Geographic School Publishing designed and developed a research-based measure to assess the English language proficiency of English language learners in middle and high school grades. The English Language Gains Test is used by teachers and other school personnel to identify students' levels of English language proficiency and to measure gains in English language proficiency over time.

National Geographic School Publishing contracted with SEG Research and Assessment to evaluate the reliability, validity, and fairness of the English Language Gains Test through a series of rigorous studies during test development (2007–2008 school year) and post-publication (2008–2009 school year). Results of these psychometric studies demonstrate that the English Language Gains Test can be used with confidence for the purpose of identifying and monitoring adolescent students' progress in English language proficiency.

The English Language Gains Test

The English Language Gains Test is used to assess students' English language proficiency level and to measure growth in proficiency over time. The English Language Gains Test can be used as an independent measure, but is also designed to be used in conjunction with National Geographic School Publishing's adolescent literacy intervention programs: *Inside Language*, *Literacy*, and *Content* and Hampton-Brown *Edge*[™]. Assessment is a critical component of these programs which provide a comprehensive solution for middle through high school English language learners as well as native English speaking students reading two or more years below grade level. The English Language Gains Test is designed primarily for

use with English language learners and plays an important role in monitoring and supporting students’ progress toward English language proficiency as they progress through the levels of *Inside* or *Edge*.

The English Language Gains Test measures student performance in four skill domains: vocabulary, grammar, reading comprehension, and written composition with 40 multiple-choice test questions and one writing prompt. The English Language Gains Test may be scored by hand, by machine using scannable answer sheets, or automatically if a student has taken the test online using the eAssessment program. Writing prompt responses are hand-scored using the written composition rubric and anchor samples for comparison of skill levels.

The English Language Gains Test includes two parallel forms. Each form includes two tests, one for students at the Beginning / Intermediate language proficiency levels and one for students at the Intermediate / Advanced language proficiency levels, giving teachers the flexibility to administer an appropriate test to each student in a multi-level classroom (see below).

FIGURE 1
English Language Gains Test Structure of Parallel Test Forms

English Language Gains Test Form 1	English Language Gains Test Form 2
Test 1 (Beginning / Intermediate)	
Skill Domains: Vocabulary Grammar Reading Comprehension Written Composition	Skill Domains: Vocabulary Grammar Reading Comprehension Written Composition
Test 2 (Intermediate / Advanced)	
Skill Domains: Vocabulary Grammar Reading Comprehension Written Composition	Skill Domains: Vocabulary Grammar Reading Comprehension Written Composition

The English Language Gains Test reports scores on a common scale to permit comparability of test scores across forms and over time. For example, a different test form can be used to assess students at the beginning (e.g., Form 1) and end of the school year (e.g., Form 2). The English Language Gains Test can also be used yearly as an interim measure to supplement data obtained from state standardized tests of English proficiency, making the English Language Gains Test a useful indicator of students’ growth in language proficiency. The diagram shown below illustrates typical options for test administration (Figure 2).

FIGURE 2
English Language Gains Test (ELGT) Sample Test Administration Plans

	Fall	Spring
Student A / Beginning ELL	ELGT Form 1, Test 1	ELGT Form 2, Test 1
Student B / Intermediate ELL	ELGT Form 1, Test 1	ELGT Form 1, Test 2
Student C / Advanced ELL	ELGT Form 1, Test 2	ELGT Form 2, Test 2

As part of the federal No Child Left Behind (NCLB) Title III guidelines, states must establish English language proficiency (ELP) standards aligned to state academic content standards, yet suitable for English language learners learning English. States must also identify a standardized test to assess students' growth toward the identified language standards. In support of this requirement, states have adopted their own language development levels and identified a suitable annual standardized assessment to measure growth. The English Language Gains Test identifies five levels of language proficiency that reflect characteristics of language performance at each developmental stage in alignment with levels described by Teachers of English to Speakers of Other Languages (TESOL). The characteristics used to define the English Language Gains Test levels are research-based and are easily aligned with state-identified scales used to assign levels on proficiency measures, such as the ACCESS or CELDT assessments, making the English Language Gains Test an effective data source to monitor students' language proficiency over time.

The English Language Gains Test yields a raw score (number correct) which converts to a common scale-score ranging from 200 to 400, with a mean of 300 and a standard deviation of .33, based on the Rasch model created to develop test items. English Language Gains Test scale-scores can then be used to classify students into one of five categories of English Language Proficiency based on the TESOL classification schema (see below). The scale allows for an accurate comparison of student scores and gains in English language proficiency over time (e.g., during one school year or across multiple years).

FIGURE 3
English Language Gains Test Scale-Score Ranges and Corresponding TESOL Language Proficiency Levels

English Language Gains Test Scale-Score Ranges	TESOL Language Proficiency Levels
200-240	Level 1. Starting
241-270	Level 2. Emerging
271-300	Level 3. Developing
301-360	Level 4. Expanding
361-400	Level 5. Bridging

English Language Gains Test Development

English Language Gains Test items were developed through a multi-stage, iterative process by a team comprising of content writers including those with expertise in English language acquisition, content reviewers, editors, and psychometricians. Test items were designed to reflect the range of difficulty across the levels of language development; items represent three

ranges of text dependency associated with the graphic requirements of beginning, intermediate and advanced English language learners. Throughout the process, item development was guided by the need to align each item with the skills measured, ensuring item accuracy, eliminating potential bias and assuring technical quality.

During the 2007–2008 school year, a representative sample of over 800 students (i.e., grade level, demographics, reading level) participated in a field study of test items which collected data for use in evaluating the quality of the items developed in order to finalize the test forms and to place all items and test forms on a common scale for scoring and reporting. Item response data was analyzed using the Rasch one-parameter item response theory (IRT) model to relate a student's language abilities and the difficulty of the test items; the results were then used to finalize the English Language Gains Test items and forms.

English Language Gains Test Technical Studies

To gather reliability and validity evidence for the English Language Gains Test, SEG Research and Assessment conducted a series of technical studies with over 800 high school students during the 2007–2008 school year and with over 450 middle school students during the 2008–2009 school year. All students in these studies were enrolled in classes designated for English language learners and included boys and girls representing a range of ethnicities, grade levels, and geographic locations.

Reliability Test reliability provides evidence of the consistency and dependability of scores obtained with a given assessment from one occasion to another and across different forms of the test. Multiple analyses were conducted using Cronbach's Alpha, a method often-used for examining reliability. Scores above .80 generally indicate a higher level of test score reliability. Reliability estimates of the English Language Gains Test range from .82 to .89 (Cronbach's Alpha), indicating that users can be confident in the consistency and stability of the English Language Gains Test scores.

Validity Test validity refers to the extent to which test scores and the uses of those scores can be supported by evidence. A series of studies were conducted and psychometric analyses were completed to gather validity evidence in support of the English Language Gains Test.

Content Validity Evidence Content-related evidence demonstrates that the test items and the domains measured by the English Language Gains Test are consistent with the identified purpose of the test and with how it is intended to be used (i.e., measure English language proficiency). A consistent set of criteria were used to develop the test items and a multi-step review process was used to review the items and to align them with test objectives.

Construct Validity Evidence Construct-related evidence demonstrates that the English Language Gains Test scores reflect a single underlying construct, can be associated with other measures of language skills and measures related to language skills, and are not the result of irrelevant variables (e.g., race, gender).

The English Language Gains Test is intended to measure a single underlying construct; English language proficiency. Principal Components Factor Analysis was used to examine the number of underlying constructs reflected in the set of test items. The results suggested a single factor solution, with less than 2% of the variance accounted for by the second and subsequent factors, providing strong evidence that the English Language Gains Test, indeed, measures a single construct.

Evidence of construct validity is also noted by the degree to which the English Language Gains Test scores relate to measures of similar constructs. To see if students' scores on the English Language Gains Test related to their scores on a test measuring similar domains, students in the technical study were also administered the Language, Vocabulary, and Reading

Comprehension portions of the Stanford 10 Achievement Test (SAT10), Abbreviated Battery. The Pearson r correlation was examined between scores on the two tests; the English Language Gains Test was highly correlated (Pearson r) with the Vocabulary ($r=.63$; $p<.01$), Language ($r=.62$; $p<.01$), and Reading Comprehension ($r=.61$; $p<.01$) subtests of the SAT 10, indicating that the tests measure a similar construct.

The Pearson r correlation between scores on the English Language Gains Test and teacher independent ratings of students' language skill levels and student self-perceived language skills were also examined. The English Language Gains Test was found to be highly correlated (Pearson r correlation) with teacher ratings ($r=.41$; $p<.01$) and to a more moderate extent with student ratings of language proficiency ($r=.20$; $p<.01$), providing additional evidence of test construct validity.

If the test scores produced by the English Language Gains Test are valid, they should reflect the construct being measured (English language proficiency) and not be influenced by other factors, such as race/ethnicity or gender. In addition to item review for potential bias throughout the development process, items were analyzed to determine if there were any differences in item performance between gender and ethnic groups that were not the result of student language proficiency. SEG Research and Assessment compared the differences (Rasch DIF analysis) in item difficulty between groups that were not attributable to actual language ability. With the exception of 8 test items flagged for further review, the items in the pool were found to be free of any differential item functioning. Items tagged as potentially biased were deleted from the selection pool for the final test forms, which includes only items found to be free of potential bias. This further construct validity evidence demonstrates that the English Language Gains Test is a fair test and that scores are not influenced by factors outside of what is intended to be measured (e.g., gender, ethnicity).

Summary

Educators need a high quality assessment for monitoring English language learners' growth in English language proficiency to supplement annual high-stakes testing. The English Language Gains Test, published by National Geographic School Publishing, provides educators with a valid, reliable, and fair measure to assess students' English language proficiency and monitor their progress over time. Since the English Language Gains Test has two parallel forms and two different test levels per form, it can be administered more than once during a school year and can also be used over multiple years as a continuing measure of students' progress. The English Language Gains Test can also be used to monitor and support students' progress toward English language proficiency as they move through the levels of *Inside* or *Edge* in middle or high school. The test was developed by knowledgeable experts in English language acquisition and assessment to meet rigorous quality standards. The tests were then studied, over multiple years with both middle and high school populations, using the highest scientific research standards for technical analysis to ensure accuracy and usefulness in measuring English language proficiency. The English Language Gains Test offers a viable assessment option and provides educators valuable data that can inform decisions as they plan, provide, and monitor instruction for adolescent English language learners.

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