ANALYSIS: Standardized Assessment

A 2008 research study indicates the possibility that repeated and targeted brain activity to specific parts of the human brain may weaken, or eliminate the use of, other areas of the brain.

Research By (9/20/2015):
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A **Lexile analyzer** is available at **www.lexile.com** to confirm the findings below. I'm using the Lexile score needed for students to read independently since Lexile scores reflect only 75% comprehension. Students should ideally independently comprehend 100% of text in order to accurately respond to assessment questions.

ACT

According to **GAINS Education Group**, the average Lexile score, a measure used to evaluate text complexity, of text used in the ACT assessment is 1140L, which means students must read at an independent reading level of **1240L**

PARCC

I analyzed the text of the **ELA/Literacy sample items** available on the **PARCC website**.

What I found was that these samples ranged in Lexile from 730-2140L. The sample passages were written at

in order to comprehend the majority of text utilized in the assessment. This information is based on ACT assessment prior to the 2014-15 school year. Last year, ACT more closely resembled PARCC on two of its subtests.

ACT Practice Test 59F

(*Administration Time: Reading – 35 Minutes*)

After analyzing a **retired ACT Practice test**, I found the reading passages were written at the following levels of complexity:

Passage I: Prose Fiction – 940L (*Independent Reading Level* – **1040L**)

Passage II: Social Science – 1420L (*Independent Reading Level* – **1520L**)

Passage III: Humanities – 770L (*Independent Reading Level* – **870L**)

the following Lexiles: 11130L, 1220L, 1370L. To independently read the most complex of these passages, students will need to read at 1470L by April (*or March*) of their junior year.

The following is a list of some of the sample items analyzed:

PARCC Sample Passages

(*Total Administration Time: 120 Minutes – 3x per School Year*)

Sample Passage #1: Abigail Smith Adams (1744-1818) – 1220L (*Independent Reading Level* – **1320L**)

Sample Passage #2: Abigail Adams Braintree, March 31, 1776 – 1130L (*Independent Reading Level* – **1230L**)

Sample Passage #3: To Abigail Adams John Adams, July 03, 1776 – 1370L (*Independent Reading Level* – **1470L**)

Passage IV: Natural Science – 1370L (*Independent Reading Level* – **1470L**)

Test questions pertained to one reading passage at a time, and they addressed the college readiness skills of: main idea; supporting details; sequential, comparative, and cause-effect relationships**;** meaning of words; and generalizations and conclusions.

ACT Aspire

The following is a Lexile analysis of the **ACT Aspire Exemplar Test Items for Reading**:

Early High School

Social Science-*Biscotti di Prato* 1150L (*Independent Reading Level* – . **1250L**) – ***Grade 12+*** Text Complexity

Social Science-*Biscotti di Prato* (#8) 1070L (*Independent Reading Level* – **1170L**) – ***Grade 10*** Text

Sample Item #1—Part A 1020L (*Independent Reading Level* – **1120L**)

Sample Item #1—Part B 1540L (*Independent Reading Level* – **1640L**)

Sample Item #2—Part A 730L (*Independent Reading Level* – **830L**)

Sample Item #2—Part B 1920L (*Independent Reading Level* – **2020L**)

Sample Item #3—Part A 2140L (*Independent Reading Level* – **2240L**)

Sample Item #3—Part B 1070L (*Independent Reading Level* – **1170L**)

The text utilized by PARCC employs archaic vocabulary, language with which most students are unfamiliar. The complexity of text students must read independently is equivalent to that

Complexity

Grade-8-Social Science-*A Capital Capitol* 1060L (*Independent Reading Level* –. **1160L**) – ***Grade 9*** Text Complexity

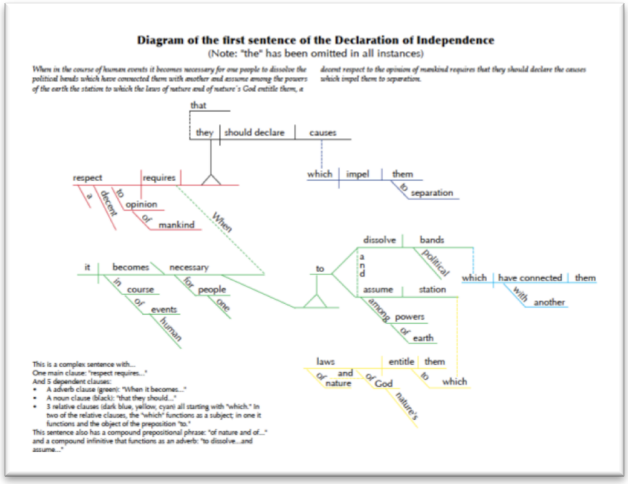
Social Science-*A Capital Capitol* (#7) 1040L (*Independent Reading Level* – **1140L**) – ***Grade 9*** Text Complexity

Grade-6-Literary Narrative-*White Fang* 1000L (*Independent Reading Level* – **1100L**) – ***Grade 8*** Text Complexity

Literary Narative-*White Fang* (#8) 1120L (*Independent Reading Level* – **1220L**) – ***Grade 12+*** Text Complexity

Grade-4-Reading-*Citizen Scientists* 1130L (*Independent Reading Level* – **1230L**) – ***Grade 12+*** Text Complexity

As you can see, based on the highest Lexile listed in each range of the Lexile-to-Grade Correspondence used in the **Declaration of Independence** (1450L), the first sentence of which is diagrammed below:



High school students are at varying stages of their cognitive development, and the average student should not be expected to complete the **multi-step, finitely detailed**, **mental manipulation** of text needed to process information at the level of sophistication used by PARCC.

The **frontal lobe of the human brain** is not fully developed until ***after* age 20.** The frontal lobe is concerned with **reasoning**,

chart, the complexity of passages is grossly inappropriate for students of all grade levels represented in the Exemplars.

The **Early High School** (*Grade 9*) reading passage requires an independent reading level of 1250L. This text would be appropriate for the score band of students above Grade 12, post-secondary education (Grades 11 and 12 – 940-1210L). ***The text in this passage should be in the range of 855-1165L.***

The **Grade 8** reading passage requires an independent reading level of 1160L. This text would be appropriate for the score band of students in Grade 9 (Grade 9 – 855-1165L). ***The text in this passage should be in the range of 805-1100L.***

The **Grade 6** reading passage requires an independent reading level of 1100L. This text would be appropriate for the score band of students in Grade 8 (Grade 8 – 805-

planning, **problem solving, parts of speech**, **executive functions** (*organization*), **judgment, emotions**, and **behavioral control**. It allows for **abstract thinking**, an understanding of **humor** (*subtle witticisms* and *word plays*), **sarcasm**, **irony**, **deception**, and the **mental processes** of others. Other functions include: **memory**, **sequencing** of events, **flexibility in thinking** processes, attentiveness of **focus.**

1100L). ***The text in this passage should be in the range of 665-1000L.***

My personal favorite:
The **Grade 4** reading passage requires an independent reading level of 1230L. This text would be appropriate for the score band of students in Grade 12+ (Grades 11 and 12 – 940-1210L). ***The text in this passage should be in the range of 445-810L.***

I argue that students, in actuality, probably perform closer to the lower end of the score band than at the higher.

SAT

I analyzed the text of **SAT Practice Tests** (*Administration Time:* Reading – 65 Minutes)

1 Test 4 Passage 1 (9-12) – 1050L (*Independent Reading Level* – **1150L**)

Smarter Balanced

I analyzed the text of **G11 ELA HS Practice Test**:

Smarter Balanced assessments are designed as untimed tests. (*Administration Time:* English Language Arts – 4:30)

1 Test 4 Passage 2 (9-12) – 950L (*Independent Reading Level* – **1050L**)

2 Test 4 Passage 1 (13-24) – 1310L (*Independent Reading Level* – **1410L**)

2 Test 4 Passage 2 (13-24) – 1170L (*Independent Reading Level* – **1270L**)

3 Test 7 Questions 6-7 – 1130L *Independent Reading Level* – **1230L**)

3 Test 7 Questions 8-9 – 1120L (*Independent Reading Level* – **1220L**)

3 Test 7 Questions 10-15 – 1410L (*Independent Reading Level* – **1510L**)

3 Test 7 Questions 16-24 – 1140L (*Independent Reading Level* – **1240L**)

Practice Test 2 QUEST 1-

QUEST 1-7 Sustainable Fashion 1220L *Independent Reading Level* – **1320L**)

QUEST 8-15 Life of Pi 750L (*Independent Reading Level* – **850L**)

QUEST 17 Informational Text 1150L (*Independent Reading Level* – **1259L**)

QUEST 18 Informational Text 1230L (*Independent Reading Level* – **1330L**)

QUEST 19 Informational Text 1010L *Independent Reading Level* – **1110L**)

QUEST 28 Informational Text 950L (*Independent Reading Level* – **1050L**)

QUEST 29 Informational Text 1280L (*Independent Reading Level* – **1380L**)

QUEST 30 Informational Text 960L

10Reading 1290L (*Independent Reading Level* – **1390L**)

Practice Test 2 QUEST 22-32 Reading 1240L (*Independent Reading Level* – **1340L**)

QUEST 1-5 Reading 1170L (*Independent Reading Level* – **1270L**)

QUEST 6-8 Reading 1170L *Independent Reading Level* – **1250L**)

QUEST 9-14 Reading 1120L *Independent Reading Level* – **1320L**)

QUEST 15-19 Reading 1040L (*Independent Reading Level* – **1140L**)

QUEST 20-24 Reading 1080L *Independent Reading Level* – **1180L**)

FINDINGS *See explanations and examples*):

(*Independent Reading Level* – **1060L**)

FINDINGS (*See explanations and examples*): https://gerriksonger.files.wordpress.com/2015/09/smarterbalanced-assessment-analysis.pdf

1. Significantly **long portions of text** in item questions requiring well-developed short-term memory in order to effectively weed through

2. **No context** provided for vocabulary

3. **Confusing** – no reference point

4. **Two-part questions** in which successfully answering Part B requires having correctly answered Part A. If Part A is wrong, so is Part B. In second example, this is combined with **lengthy portions text** required to support Part A

5. **Excessive number of choices**, finitely detailed in

https://gerriksonger.files.wordpress.com/2015/09/sat-assessment-analysis.pdf

1. Use of excessively high text complexity **with no research** identifying average reading Lexile of junior level high school student.

2. **No research** supporting SAT adequately addresses cognitive development and individual abilities of adolescents.

3. Analysis of **subtle shifts in focus** throughout course of entire passage, use of **unfamiliar or multi-definition vocabulary** (i.e. *reservations*)

4. Use of **figurative language**is difficult for ELL students

5. SAT claims use of **context clues**, but none actually provided in text.

6. **Dependence upon vocabulary and background** differentiation

6. Use of **unfamiliar vocabulary** (particularly for ELL and Sp Ed students).

7. **Listening portion** requires well-developed short-term memory, otherwise valuable time is lost going back to sift through sound bytes.

8. **Multi-text comparisons**(*well-developed short-term needed, background knowledge nee*ded)

knowledge rather than critical thinking skills in order to answer correctly.

7. Lack of **content appealing to visual and kinesthetic modalities**. The examples attached contain visual details but no pictures are provided to help those students who process information better visually.

8. **Reliance on answer from previous question** in order to answer another question (*SAT representatives claimed they weren't doing this.)*

9. **Multi-text compare/contrast** (*SAT representatives claimed they weren't doing this.)*

10. **Reliance on information processing** rather than introspective, original, creative and conceptual thought processes, which are sensory rather than memory-based. **Rewiring the**

neural-activity of student brain through repetition of processing activities in limited and specific parts of the brain.

11. Use of **quantitative assessment** to measure qualitative data.

Career readiness information from **MetaMetrix** shows the following:

LEXILES AND LIFELONG READING:

Federal Tax Form – 1260L

Aetna Health Care Discount Form – 1360L

GM Protection Plan – 1150L

Medical Insurance Benefit Package – 1280L

Application for Student Loan – 1270L

CD-DVD Player Instructions – 1080L

Installing Child Safety Seat – 1170L

Microsoft Windows User Manual – 1150L

READING IN THE WORKPLACE:

Labor – 1000L

Service – 1050L

Construction – 1080L

Craftsman – 1100L

Clerk – 1110L

Foreman – 1200L

Secretary – 1250L

Sales – 1270L

Supervisor – 1270L

Nurse – 1310L

Executive – 1320L

Drivers' Manual – 1220L

Teacher – 1340L

Accountant – 1400L

Scientist – 1450L

LEXILE SCORES NEEDED FOR:

Education (11–12) – 1130L

Work – 1260L

Community College – 1295L

University – 1395L

PRIMARY SOURCES:

Bill of Rights – 1540L

Declaration of Independence – 1450L

Gettysburg Address – 1490L

Preamble to the Constitution – 1930L

Emancipation Proclamation – 2040L

Magna Carta – 1740L

REMAINING QUESTIONS:

Information still needed from SAT reps:

1. Representatives said there was a validity study – I'd like to see the study.

2. Research supporting how assessment meets changing cognitive development of high school students.

There is no research stating, "**fewer** instances of finitely detailed, multi-process, evaluative questions will support changing and not yet fully developed cognitive abilities of high school students" as stated by

representatives. Scaffolding begins at simplistic level then increases in complexity. This is very different than "fewer complicated questions" versus "increased number of complicated questions" as a means to compensate for adolescent brains that are not yet fully developed.

3. I would like to see research supporting representatives' claim that removing a student's point of view on written expression portion of assessment promotes increased skill in critical thinking – this is simply nonsense. **Critical thinking lies in the synthesis and application of knowledge**, NOT in the identification and comparison of knowledge.

4. I'd like to see a copy of the contract, and I'd like to do a cost analysis between SAT and ACT. I am not in favor of implementing SmarterBalanced or PARCC.

5. I would like to see research supporting **receptive processing outweighs expressive processing** when determining college/career success. What portion of SAT and ACT assessments are receptive vs. expressive?

6. SAT needs to develop score ranges and to scaffold in complexity each skill measured similar to **ACT**.

7. A study needs to be performed identifying the average Lexile ranges of students enrolled in advanced, average, and preparatory level English courses.

RECOMMENDATION:

A **research study published in 2008** indicates the possibility that repeated and targeted brain activity to specific parts of the human brain may weaken,

or eliminate the use of, other areas of the brain. The brain only has so much neural support. If the brain is trained through repetition to narrow this neural support to a specific region of the brain, then neural activity will supply less support, or perhaps no longer support, other very important areas of the brain, specifically those areas enabling students to think conceptually and creatively.

Based on these findings, **my first recommendation would be to file legislation calling for a moratorium on the use of standardized assessment until this possibility is further researched**.
My second recommendation, if implementation cannot be avoided, is the **implementation of ACT** over SAT for the following reasons.

1. I do not recommend amplifying the amount of time students are exposed to repetitious and narrow utilization of the brain's neuroactivity. Time spent practicing skills that rely heavily on memory, organization, and planning MUST be balanced with time spent utilizing parts of the brain that foster creative and problem-solving processes, which are sensory in nature. **I do not recommend students use the Home-Based package offered by SAT**. Teachers should offer support in the classroom balanced with opportunities for students to employ creativity and problem-solving skills, which educators have always identified as best practice.

2. I do not recommend **excluding a student's point of view** from written expression assessments. Teachers will teach to the test because it makes no sense not to do so. Again, it is not the regurgitation of information that produces original and inspirational thought. It is the synthesis and application of a student's unique point of view that should always be a priority in education.

3. ACT offers **scaffolding and score ranges** and SAT does not at this point in time. Teachers do not have to reinvent the wheel if they are allowed to continue using ACT. Master teachers become master teachers because they have opportunity to perfect their work. This can never take place if they continue to start from scratch each year. Teachers were told PARCC would not cause them to reinvent what they were already doing; but in practice, this really was not the case.

FINAL NOTE:

My experience has been that students at the preparatory level in reading comprehension can score anywhere in the range of beginning reader (decoding) – 800L. Students enrolled in average level courses score between 800-1000L. Students in advanced courses have not been assessed, but they should be in order to determine the accessibility of standardized assessment for a wide range of student ability levels.

Consideration should be given to the intended purpose of standardized assessment in contrast to what its implementation actually achieves in practice.