

The Reading Ability of College Freshmen

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ABSTRACT

Over the past 50 years, an increasing proportion of student graduating high school attend college, but literacy levels in the United States have remained largely unchanged. We present preliminary results that suggest the literacy levels of assessed first year college freshmen are above 5th grade but below 12th grade, that only 32% of these freshmen are reading at a 12th grade level, and that this high-performing group has only a 69% chance of passing the reading portion of the GED high school equivalence test.

Keywords

adult literacy, higher education, NAEP, TABE

1. INTRODUCTION

The percentage of high school graduates immediately attending college has steadily increased from 60% in 1990 [5] to 69% in 2015 [2]. However, during this same period the average reading score of 12th grade students on the National Assessment of Educational Progress (NAEP) has declined slightly, such that in 2015, only 37% of students were deemed proficient readers [6]. If all proficient readers immediately attend college, then only 54% of college freshmen are proficient readers. Accordingly, the remaining 46% of college freshmen are either basic or below basic readers.

While it is alarming to think that approximately half of college freshmen are not proficient readers, the NAEP proficiency criteria and cut scores are not without controversy [1]. For example, in a recent mapping of NAEP standards to state standards for 8th grade reading (the highest grade available), only one state was found to have standards aligned with NAEP's proficient category. Given the controversy, it is not clear if the NAEP standards are too high or the state standards are too low.

To better understand the relationship between NAEP reading scores and college freshmen reading ability, we conducted a pilot study using questions from the Reading section of the Tests of Adult Basic Education (TABE). The TABE [3, 4] is useful for exploring the question of reading proficiency of college freshmen because i) TABE items have national norms and are aligned with grade equivalences, allowing us to categorize freshmen reading ability according to grade level and ii) TABE can be used to predict General Educational Development (GED) test performance, which is a proxy for determining whether a participant's reading ability is high school equivalent.

2. METHOD

2.1 Participants

Participants (N = 1062) were recruited through the psychology subject pool at an urban university in the southern United States in two waves of online data collection. The first wave (N = 313), which took place during the spring semester of 2015, was conducted as a regular online study, but the second wave (N = 749), which took place during the fall semester of 2015, was conducted as a screening component for the entire subject pool. Subject pool screening is used to determine eligibility for other studies later in the semester and therefore represents an even more diverse group of participants, as it largely eliminates the self-selection bias of experimental sign up. No demographics of participants were collected.

2.2 Materials

Ten items (#4-13) were selected from the nationally-normed, TABE 10 Form D Reading Survey. Form D (Difficult) is designed to assess reading ability in grade ranges 6.0 - 8.9 and therefore may seem a less obvious choice for assessing college freshmen. However, Form D items cover the widest range of grade equivalents (grades .7 - 12.9) of all TABE 10 forms and therefore has some additional utility when the underlying grade level is unknown. Because the 10 items used in the present study were selected from the 25-item TABE 10 Form D Reading Survey, the distribution of grade equivalents for items does not match the distribution of the complete survey and instead falls into three clusters: five items are at grades 4-5 (3.9, 4.4, 4.8, 5.1, and 5.2), three items are at grades 11-13 (11.4, 12, and 12.9), and two items are at grades 6-7

(6.2 and 7). All items had multiple choice format with four response options.

2.3 Procedure

Participants completed the informed consent and the 10 items using a web browser. Because the study was online and not proctored, the time guidelines of the TABE (approximately 1 minute per question) were not enforced, and due to technical problems, the time participants spent on the items could not be determined. Participants read each of three text passages in turn and answered three to four items after each passage by selecting a multiple-choice response option.

3. RESULTS

Overall, 75% of participants answered 80% or more items correctly, suggesting that the 10 items were overall too easy, as recommendations for TABE specify that participants answer 40% to 75% of the items correctly [4]. Participant performance varied across item difficulty cluster, however. While 73% of participants answered all five items correctly in the 4-5th grade cluster, only 32% answered all three items correctly in the 11-13th grade cluster. Furthermore 30% of participants answered one item or less correctly in the 11-13th grade cluster. Using the TABE guidelines above, this differential cluster performance suggests that 4-5th grade items are too easy but that 11-13th grade items are too hard for the participants assessed.

These results may also be considered in terms of scale scores and GED equivalence. According to previous work mapping TABE Reading scale scores to GED Reading test scores [3], a TABE scale score of 523 corresponds to the passing GED score of 450. Scale scores for each item cluster and items overall were calculated and compared to the GED criterion. Only participants who answered all 10 items correctly (248 participants) or all of the 11-13th grade items correctly (335 participants) surpassed the GED criterion. Using the TABE-GED mapping [3], participants who answered all of the 11-13th grade items correctly had a 69% chance of passing the GED Reading test. Thus while 32% of all participants answered the 11-13th grade items correctly, only 22% of all participants are likely to pass the GED Reading test.

4. DISCUSSION

Our preliminary results suggest that college freshmen reading ability overall is between 5th and 12th grade. This finding is plausible given NAEP results that only 37% of 12th grade students are proficient readers [6]. The lack of a more specific grade-level assessment of freshmen reading ability is attributable to the 10-item assessment used, which lacked medium difficulty items. In the present study, the duration of the complete 25 item TABE Survey was beyond what could be accommodated logistically; however, our results indicate that such logistic considerations must be overcome to assess the reading ability of college freshmen adequately.

Analysis of the 11-13th grade cluster offers suggestive results regarding freshmen reading ability, but must be treated with caution given that there were only three items in this cluster. Participants who answered all three items in this cluster correctly could reasonably be assumed to be proficient readers, and the difference between this percentage (32%) and

NAEP's percentage of proficient readers (37%) could be easily explained by regional differences. Although demographic data was not collected for this study, the freshman demographics for the university where the study was conducted suggest that approximately half of students are white and half are African-American. These two groups have NAEP 12th grade Reading Proficiency rates of 46% and 17% respectively, averaging 32% as found in the present study.

However, as previously noted, only 69% of graduating seniors went straight to college in 2015 [2], suggesting that 54% of college freshmen should be proficient readers, assuming that all NAEP Proficient readers attend college. The present finding that reading proficiency is closer to the high school rate than the projected college rate could reflect a self-selection effect whereby the most proficient readers attend schools with more stringent admissions criteria on standardized tests.

The projection that only 69% of participants who answered all three items in the 11-13th grade cluster would pass the GED Reading test gives a strikingly different assessment of freshman reading proficiency (22% vs. NAEP's 37%) that cannot be easily explained by regional differences and may be a useful target for future research.

Altogether, our findings suggest that two-thirds of college freshmen assessed have reading ability corresponding with below Proficient as described by NAEP. More accurate assessment and determination of regional differences are important areas of future research, as reading proficiency plays a large role in college success.

5. ACKNOWLEDGMENTS

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