

A Holistic View of Course Placement Decisions— Avoiding the HS GPA Trap

Ross Markle & Steve Robbins
Educational Testing Service – March 2013

As some colleges and universities experience low rates of student success, many point to the large number of students who are placed into and fail to complete developmental education courses. Research examining the efficacy of course placement tests has suggested that success rates would increase if students were placed more accurately. A recent study by the Community College Research Center (CCRC; Scott-Clayton, 2012) quantitatively demonstrates the inaccuracy of current course placement systems, suggesting that as many as 24% of students in math and 33% of students in English courses are misplaced. As a means of improving placement accuracy, the study recommends the use of expanded criteria, including background characteristics and high school GPA.

What we know:

- Course placement tests provide content and diagnostic information critical to understanding course-specific acquired knowledge.
- Noncognitive factors (e.g., motivation, self regulation, and social interaction) are critical to success in the classroom and beyond.
- Expanding the criteria for course placement decisions could decrease placement error rates and lead to increases in student success.

This research assumes that these additional criteria capture student noncognitive factors, such as motivation or classroom behavior, that incrementally add to the prediction of student success.

We agree that current means of course placement are insufficiently robust, and that the inferences we draw about students' likelihood of success are often limited. We also agree that improving course placement is critical to the long-term goal of improving student success and degree attainment. However, using student background characteristics alone, or in tandem with course placement tests, is problematic. Here, we outline the theoretical and practical issues that come with using

GPA or background characteristics, as well as propose a fairer, valid, and reliable method to expand placement criteria — using a standardized assessment of psychosocial factors.

Issue 1: High school GPA, background characteristics, and other proxy variables may not be valid or fair representations of student characteristics (e.g., motivation). Much of the published research that supports high school GPA as a predictor of academic success notes that this measure captures more than just the cognitive ability assessed by placement (or, in other cases, admission) tests. Indeed, GPA is a measure of “typical performance” (based on daily observation of students in the classroom), while test scores are a measure of “maximal performance” (based on one high-stakes demonstration of ability) (Cronbach, 1990). Proponents of using GPA often note that it captures

students' abilities or achievements as well as certain behavioral or attitudinal factors, such as completing assignments on time, showing up to class, or engaging in discussions.

However, the multifaceted nature of GPA creates issues in fairness. For some students, GPA may reflect academic ability, while for others it might reflect ability to show up to class, and for others it might represent their tendency to get along with their peers. Researchers have noted that teachers differ in the elements used to assign a grade, and in the relative importance of those elements. Here, we highlight that this might be an issue of fairness or accuracy, but others have also noted that this creates unreliability in student grades (e.g., Allen, 2005; Brookhart, 1993; Burke, 2006).

What we can do:

- Some have suggested using high school GPA or background characteristics for placement, but these can be inaccurate or biased estimates of students' likelihood to succeed.
- Direct noncognitive assessments can not only increase course placement accuracy, but also help faculty, staff, and students become aware of the factors that are likely to facilitate or hinder success.
- Beyond academic placement, noncognitive assessments can be a resource for other offices and programs on campus.

Issue 2: *High school GPA is confounded by high school quality.* Academic rigor also creates concern around grades. The predictive ability of grades varies greatly depending on which courses a student has taken and the quality of the schools that a student has attended. In two separate reports published by the U.S. Department of Education, Clifford Adelman (1999; 2006) demonstrated the ability of high school experiences to predict students' success in college. Although Adelman found GPA to be a significant predictor of success, he also concluded that "academic intensity of the student's high school curriculum still counts more than anything else in pre-collegiate history in providing momentum toward completing a bachelor's degree" (2006; xviii). Thus, yet again, GPA may differentially represent success for one student over another.

Issue 3: *High school GPA is not an option for some students.* Using GPA for placement decisions also has practical limitations. Some students — such as those who are home-schooled, obtained a GED, or attended schools that do not use traditional grades — will not have GPA data available. Moreover, for adult learners and other students who are not coming directly from high school, GPA information may be an inaccurate representation of their ability. Given that institutions of higher education, particularly community colleges, are increasingly asked to serve a broader population than simply recent high school graduates, adopting a system that either cannot apply to or misrepresents students' abilities would seem counterproductive.

Creating an Effective Solution

Many have endorsed the use of noncognitive or psychosocial assessments as a means of holistically understanding students and placing them more accurately. Several recent studies (e.g., Boylan, 2009; Burdman, 2012; Conley, 2007; Levine-Brown, Bonham, Saxon, & Boylan, 2008) have acknowledged that current course placement tests do not sufficiently represent all the skills that can help students succeed. Indeed, a vast body of research has shown that, for some student outcomes, noncognitive skills such as study skills, motivation, and social connection can play as much or more of a role than academic ability or student background (e.g., Poropat, 2009; Richardson, Abraham, & Bond, 2012; Robbins, et al., 2004; 2009).

Noncognitive assessments provide direct indicators of key skills that students need to succeed. Proxy variables, such as attending a nonlocal high school or delaying college enrollment, can be incredibly inaccurate representations of student attributes. In both cases, the inferences made — that nonlocal students must be more motivated to attend a given institution, and that students who have delayed enrollment have more thoughtfully planned their education — are significant inferential leaps. These attributions should not be used to make decisions about course placement, given the myriad factors that might influence them. We would certainly not place students into English classes based upon the number of books they own simply because book ownership is a logical or empirical predictor of classroom success. Rather, noncognitive assessments provide direct scientific assessment of student skills and attributes.

Additionally, noncognitive assessments provide diagnostic feedback that can be used not only to place students, but also to build a plan for students' success, which cannot be provided by high school GPA or student background characteristics. Many of the programs and services that exist on college campuses are designed, either explicitly or implicitly, to address noncognitive attributes. Advisors help students manage their time and set goals. Counseling services help students manage stress. Social programs, clubs, and organizations help students generate networks, both for social development and as a resource in time of need. After all, the goal of institutions is not simply to place students more accurately, but to help them achieve a degree.

Conclusion

Research by the CCRC has pointed to the inaccuracy of existing academic placement tests, and suggested high school GPA and background characteristics as potential ways to expand criteria, decrease placement errors, and increase student success. However, to rely on just this data is not appropriate. GPA and background characteristics can unreliably and unfairly represent students' likelihood to succeed, and in many cases are not viable options given unavailability or inaccuracy of the data. Psychosocial assessments have been supported by many in the field of developmental education, and not only can increase the accuracy of course placement, but also — and just as importantly — provide a holistic understanding of the strengths and challenges that likely impact student success. Colleges and universities should seek an approach that can not only predict student success, but can also facilitate it through student engagement and compliance within the classroom (cf. Li et al., in press).

References

- Adelman, C. (1999). *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*. Washington, DC: U.S. Department of Education.
- Adelman, C., & Office of Vocational and Adult Education (2006). *The Toolbox Revisited: Paths to Degree Completion From High School Through College*. Washington, DC: U.S. Department of Education.
- Boylan, H. R. (2009). Targeted Intervention for Developmental Education Students (T.I.D.E.S.). *Journal of Developmental Education*, 32(3), 14-23.
- Allen, J. D. (2005). Grades as valid measures of academic achievement of classroom learning. *The Clearing House*, 78(5), 218-223.
- Brookhart, S.M. (1993). Teachers' grading practices: Meaning and values. *Journal of Educational Measurement*, 30(2), 123-143.
- Burdman, P. (2012). *Where to begin? The evolving role of placement exams for students starting college* [Report]. Boston, MA: Jobs for the Future.
- Burke, B.L. (2006). For the 'grader' good. *Observer*, 19(11). Retrieved from <http://www.psychologicalscience.org/observer/>.
- Conley, D. T. (2007). *Toward a more comprehensive conception of college readiness*. Eugene, OR: Educational Policy Improvement Center.
- Cronbach, L. (1990). *Essentials of Psychological Testing* (5th ed.). New York: Harper Collins Publishers.
- Levine-Brown, P., Bonham, B. S., Saxon, D. P., & Boylan, H. R. (2008). Affective assessment for developmental students, part 2. *Research in Developmental Education*, 22(2), 1-4.
- Li, K., Zelenka, R., Buonaguidi, L., Beckman, R., Casillas, A., Crouse, J., Allen, J., & Robbins, S. (in press). *Readiness, behavior, and foundational mathematics course success*.
- Poropat, A. E. (2009). A meta-analysis of the Five Factor Model of personality and academic performance. *Psychological Bulletin*, 135, 322-338.
- Richardson, M., Abraham, C. & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, 138, 353-387.
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130, 261-288.
- Robbins, S., Oh, I., Le, H. & Button, C. (2009). Intervention effects on college performance and retention as mediated by motivational, emotional, and social control factors: Integrated meta-analytic path analyses. *Journal of Applied Psychology*, 94, 1163-1184.
- Scott-Clayton, J. (2012). *Do high-stakes placement exams predict college success?* (CCRC Working Paper No. 41). New York: Community College Research Center. Retrieved online from <http://ccrc.tc.columbia.edu/Publication.asp?UID=1026>.