The *SuccessNavigator*™ Assessment: A Holistic Approach to Predicting Academic and Retention Success

Ross Markle & Steve Robbins
Educational Testing Service – 2013

Introduction

Over the past several decades, research in higher education has shifted its focus from increasing *access* to higher education to increasing *success* once students arrive. Several decades of research explored who was failing to persist to a college degree, often identifying the traditionally disadvantaged racial, ethnic, and socioeconomic subgroups, but these studies were not effective in identifying why these students weren't succeeding, or how institutions could act to improve success (Eaton & Bean, 1995). Recently, several large studies have pointed to a range of psychosocial factors (e.g., study skills, class attendance and participation, commitment, motivation, social connections) associated with students' success (e.g., Poropat, 2009; Richardson, Abraham, & Bond, 2012; Robbins, et al., 2004; 2009). Increasing evidence shows that these psychosocial factors predict success above and beyond indicators such as standardized test scores, high school GPA, and socioeconomic status. Moreover, the relative importance of cognitive ability and psychosocial factors varies depending upon the measure of student success or outcomes (i.e., persistence vs. GPA; Robbins et al., 2004).

The *SuccessNavigator* Framework for Psychosocial Assessment

Academic Skills **-** Tools and strategies for academic success

Commitment **-** Drive toward and perceived importance of academic success

Self-Management **-** Reactions to academic stressors

Social Support **-** Connecting with people and resources for success

Here we introduce you to the *SuccessNavigator*™ assessment, a broad-based psychosocial assessment designed to improve success by indicating a given student's likelihood for academic and retention success, as well as providing developmental feedback and tailored support strategies.
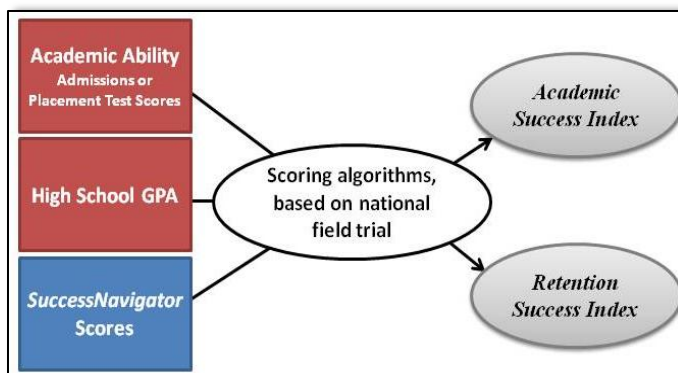
Building the *SuccessNavigator* assessment

Over the past several years, ETS® has been working to build quality assessments of psychosocial skills and study their relevance in higher education. This process has involved collaboration between the researchers in ETS's Center for Academic and Workforce Readiness and Success and institutions of higher education across the United States. In developing the *SuccessNavigator* assessment, we have administered assessments to more than 10,000 students at an array of colleges and universities, ranging from small community colleges to large metropolitan systems and research

universities. Working with these institutions, we follow students to not only determine how well we can predict success, but also how institutions can intervene to improve it.

The *SuccessNavigator* assessment produces several key pieces of information to help students, faculty, staff, and the institution as a whole. First, psychosocial factors are outlined using four broad areas – *Academic Skills*, *Commitment*, *Self-Management*, and *Social Support* – which can be used to understand the factors that might facilitate or hinder a student's success. Each of these four areas also includes subscores that further define strengths and weaknesses. The *SuccessNavigator* assessment scores have been developed and supported by a rational-empirical approach that uses both established theory and psychometric evidence (see Markle, Olivera-Aguilar, Jackson, Noeth, & Robbins, 2013).

Additionally, the *SuccessNavigator* assessment captures students' admissions or placement test scores and high school GPA, when available. These data can be uploaded by the institution or reported by the student. Capturing these data supports a holistic understanding of students that includes both cognitive and noncognitive indicators.

Student academic test scores, high school GPA, and the *SuccessNavigator* assessment scores are then combined to indicate how well students are likely to do in their first year of postsecondary education. One score — the *Academic Success Index* — is tied to a student's GPA, with higher scores indicating a higher first-semester GPA. Another index — the *Retention Success Index* — is tied to persistence to the second semester, with higher scores indicating a greater likelihood of returning.

Through a recent national field trial, we were able to demonstrate that *SuccessNavigator* is an assessment that continues ETS's high standards of quality. In addition to evidence of strong internal validity and reliability for the *SuccessNavigator* assessment scores, we've shown strong predictive validity for the Academic and Retention Success Indices. Figures 1 and 2 below show sizable differences in success among students who score in the high (top 25%), middle (middle 50%), and low (bottom 25%) ranges of these indices. In Figure 1, we see that students in the low Retention Index band have a 77.4% chance of returning for their second semester, while students in the high
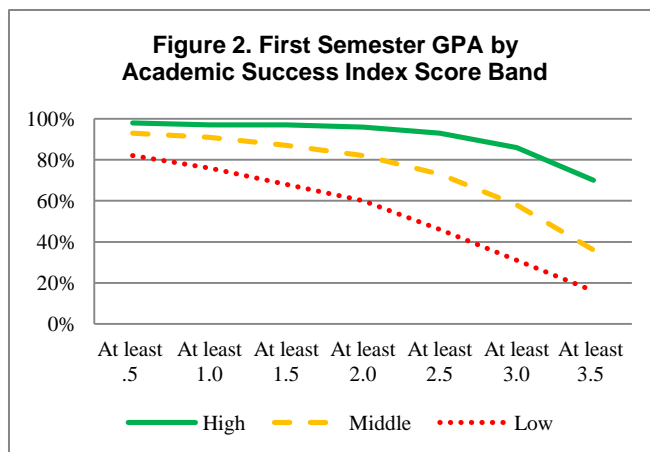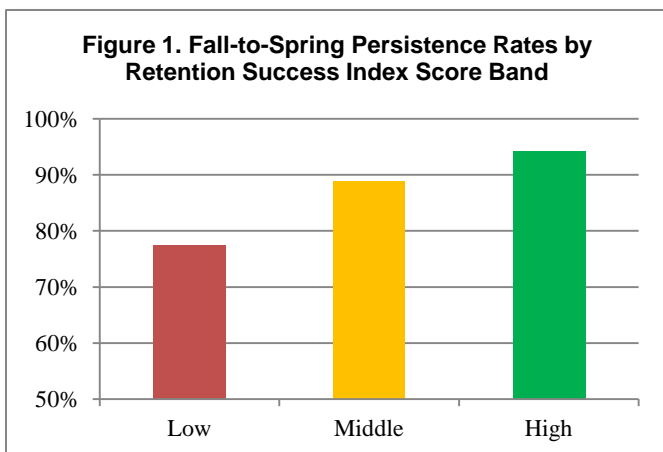
band have a more than 94% chance of returning. Similarly, 70% of students in the high Academic Success Index band receive a first-semester GPA of 3.25 or better, compared to only 16% of students in the low band (Figure 2). Thus, advisors, faculty, staff, and others can use these scores to determine what level and type of engagement is necessary with each student. A full description of the methods and findings can be found in Markle et al. (2013).

Using Scores to Guide Student Interventions

The *SuccessNavigator* assessment also provides more granular scores to define the areas of Academic Skills, Commitment, Self-Management, and Social Support. This specific feedback, coupled with the action plans and supplemental materials provided through the *SuccessNavigator* assessment advisor score report, provides a customized plan for success for each student. Considering whether a student has a low, moderate, or high likelihood of success can help faculty and staff determine the extent to which they might engage with a student. Students in the low bands of these indices are at high risk of either dropping out or doing poorly in the classroom. Interventions here should be early and intrusive, including extended or mandatory advising, tutoring, or first-year/student success courses. Likely, engagement with these students will require approaches from multiple angles.

Some schools, however, may elect to focus resources on students in the middle success bands. These students are "on the bubble" of success, and an effective intervention, even a relatively small one, could be enough to secure their success. These students may have some questions about their goals, or are searching for the right connection on campus. There are also benefits to engaging students who have a high probability of success. Even though these students are likely to do well in class and/or persist to a degree, these are also students who might be suited for leadership positions on campus, or to excel in research activities. These students may even serve as peer mentors for other students at their institution.

Building a Larger Plan for Success

Targeting the level of intervention based on a broad-based understanding of students' likelihood of success is helpful, but only one part of a complete and effective student success agenda. The *SuccessNavigator* assessment also provides two *Course Placement Indices*, one in math and one in English, designed to work in concert with existing placement tests to suggest students who could benefit from being accelerated to a higher-level course. By shortening the path between enrollment and the degree, we place students in more challenging courses and increase their likelihood for success (see Markle & Robbins, 2013a;b).
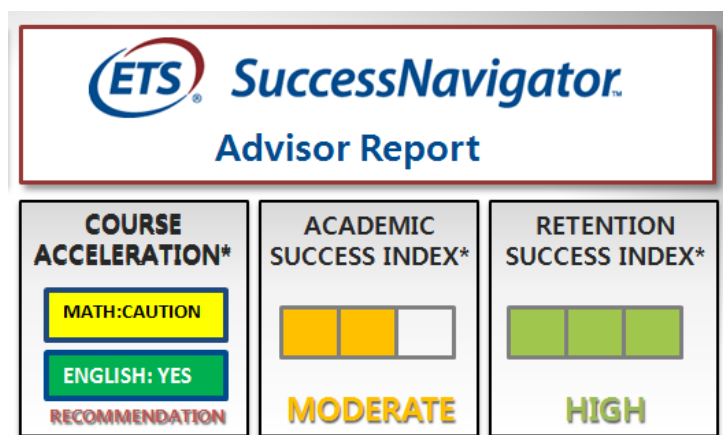
In other Research Briefs, we discuss how to use both the *Course Placement Indices* and the developmental feedback and action plans that are part of the *SuccessNavigator* assessment score reporting. Here, we provide materials and suggest activities to both students and advisors that can help foster these psychosocial skills and improve student success. You can view sample score reports and supporting content at **www.ets.org/successnavigator**.

Conclusion

As institutions seek to build a larger plan for student success, they must first gain a better understanding of the broad set of factors that can help or hinder students at their institution. It is important to focus resources where they can be most effective. The *SuccessNavigator* assessment meets these needs by providing a holistic picture of each student — considering both cognitive ability and psychosocial factors. The Academic and Retention Success Indices help institutions identify students' likelihood of success, which can lead to more informed and effective interactions. Moreover, the *SuccessNavigator* assessment also addresses other areas that are key to an effective student success agenda, such as improving course placement or using tailored feedback and action plans.

References

Eaton, S. B., & Bean, J. P. (1995). An approach/avoidance behavioral model of college student attrition. *Research in Higher Education, 36*(6), 617–645.

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.

Markle, R. E. & Robbins, S. B. (2013a). *Breaking the developmental education logjam: A holistic approach to acceleration.* Princeton, NJ: Educational Testing Service.

Markle, R. E. & Robbins, S. B. (2013b). *A holistic view of course placement decision – Avoiding the HS GPA trap.* Princeton, NJ: Educational Testing Service.

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