The Student Readiness Inventory and the Big Five: Examining social desirability and college academic performance

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Abstract

This study compared the relative power of a Big Five measure, the Big Five Inventory (BFI), and a measure of academic-related factors, the Student Readiness Inventory (SRI), for predicting college academic performance (GPA) using a sample of 468 college students from 2- and 4-year institutions. The extent to which social desirability influenced construct and predictive validity was also examined. Both the SRI and the BFI were significant predictors of college GPA, but hierarchical regression results showed that the SRI scales accounted for a larger proportion of variance (range = 22% to 29%) than the BFI scales (range = 3% to 9%). As expected, the impact of social desirability on the relations between the two instruments, as well as between each instrument and college GPA, was minimal. Further evidence of the construct validity of the SRI was provided by the emergence of moderate to strong relations between the BFI (Extraversion, Neuroticism, and Conscientiousness) and the SRI (Social Activity, Emotional Control, and Academic Discipline), respectively.

Keywords: College academic performance; Big Five; Student Readiness Inventory

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1. Introduction

With 6-year graduation rates averaging as low as 34% at some institutions (Swail, 2004), there is some concern that students are ill prepared for college. To circumvent academic difficulties, early identification of at-risk students has become critical and has centered on standardized achievement tests and high school GPA. However, certain groups are disadvantaged by standardized test scores (Jencks & Phillips, 1998; Sackett, Schmitt, Ellingson, & Kabin, 2001), and use of school-based performance indicators do not take into account differences across schools in expectation and performance (Bassiri & Schulz, 2003; Tam & Sukhatme, 2003), nor high school grade inflation (Ziomek & Svec, 1995). Standardized tests have been demonstrated as valid methods for predicting college outcomes (ACT, 1997; Willingham, Lewis, Morgan, & Ramist, 1990); however, these account for only a portion of the variance and should be augmented by the assessment of other relevant attributes (Sternberg, 1986).

Research has demonstrated the contribution of noncognitive factors in predicting college student academic success (Musgrave-Marquart, Bromley, & Dalley, 1997; Wolfe & Johnson, 1995). Similarly, numerous nonacademic programs aimed at increasing retention and academic performance are recommended for college use (e.g., Keels, 2004; Martin, Swartz-Kulstad, & Madson, 1999). Postsecondary institutions planning early identification and intervention programs require clear noncognitive assessments to customize their interventions to at-risk student characteristics and needs (Noonan, Sedlacek, & Veerasamy, 2005; Sternberg, 1986).

Big Five measures have yielded some results in predicting academic success, through relations of performance with conscientiousness (Busato, Prins, Elshout, & Hamaker, 2000; Musgrave-Marquart et al., 1997) and agreeableness (Fritzche, McIntire, & Yost, 2002). These findings, however, offer only broad factors to serve as a basis for intervention and may not be as predictive as more narrow facets of personality (Lounsbury, Sundstrom, Loveland, & Gibson, 2002; Paunonen & Ashton, 2001).

To address this issue, Le, Casillas, Robbins, and Langley (2005) developed the Student Readiness Inventory (SRI), a measure of psychosocial and academic-related factors (PSFs), found in a recent meta-analysis to be predictive of academic performance (Robbins et al., 2004). The SRI is comprised of 10 scales that measure a range of academic-related constructs (see Table 1). Research found that SRI constructs were relatively independent of standardized achievement test scores (Robbins, Allen, Casillas, Peterson, & Le, in press), and offered a viable alternative to forecasting academic performance.

In a longitudinal study, the SRI constructs, demographics, and traditional predictive factors were examined to determine what role each played in the prediction of college performance (Robbins et al., in press). With a sample of 14,464 students from 23 2-year and 25 4-year institutions, incremental predictive validity models were run. After controlling for SES, race/ethnicity, gender and differences between postsecondary institutions, PSFs were significant predictors of academic performance above all other factors in the models.

This has important implications for institutions aiming to enhance student academic success. With only high school GPA and achievement test scores to serve as diagnostic tools, college counselors and advisors are limited in their identification of at-risk students and the customization of their interventions. The SRI PSFs offer a skills and personality based interposing avenue which, coupled with cognitive interventions, may yield better results.
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