

NONCOGNITIVE MEASURES FOR HIGHER EDUCATION ADMISSIONS

Sedlacek, W. E. (in press). Noncognitive Measures for Higher Education Admissions. In B. McGaw, E. Baker, & P. L. Peterson (Eds.). *International Encyclopedia of Education*, Third Edition. Amsterdam, The Netherlands. Elsevier.

William E. Sedlacek
University of Maryland

Abstract

Standardized tests and grades have serious limitations in telling us what we need to know about the academic potential of applicants from diverse backgrounds and cultures. An alternative system of assessment based on noncognitive variables is presented. How to measure variables such as self-concept, nontraditional leadership, long-term goals, developing a community, and handling racism are covered. Implications for admissions in higher education are discussed.

Introduction

We appear to have forgotten why tests were created in the first place. While they were always considered to be useful in evaluating candidates, they were also considered to be more equitable than using prior grades because of the variation in quality among preparatory schools. The College Board has long felt that the SAT was limited in what it measured and should not be relied upon as the only tool to judge applicants (Angoff, 1971).

In 1993, the verbal and mathematical reasoning sections of the SAT were lengthened and the multiple-choice Test of Standard Written English was dropped. The name was changed from Scholastic Aptitude Test to Scholastic Assessment Tests, while retaining the SAT initials. Currently it is just called the SAT-I. In 2003, the College Board announced that an essay would be added and the analogies item type removed as of 2005. Despite various changes and versions over the years, the SAT in essence measures what it did in 1926, verbal and math ability; it is basically still a general intelligence test (Sedlacek, 2003, 2004).

However, we have come to the point where the "Big Test" has become the focal point in our schools (Lemann, 2000). It has become the standard by which we judge ourselves and others. Many assume that if an individual has high SAT scores, or if a school has high mean SAT scores, the students must be learning something, and the school must be good. To cite that common metaphor; the tail is wagging the dog.

Test results should be useful to educators, student service workers, and administrators, by providing the basis to help students learn better and to analyze their needs. As currently designed, tests do not accomplish these objectives. Many teachers tend to teach to get the highest test scores for their students, student service workers may ignore the tests, and too many administrators are satisfied if the average test scores rise in their school. We need some things from our tests that currently we are not getting. We need tests that are fair to all and provide a good assessment of the developmental and learning needs of students, while being useful in selecting outstanding applicants. Our current tests don't do that.

Keeping Up With Change

The world is much different than it was when the SAT and other tests were developed in the last century. International students, women, people of color, gays, lesbians and bisexuals, among others, are participating in higher education in more extensive and varied ways (Knapp, Kelly, Whitmore, Wu & Gallego, 2002). Commonly employed tests have not kept up with these changes (Sedlacek, 2004).

We need a fresh approach. It is not good enough to feel constrained by the limitations of our current ways of conceiving of tests. Instead of asking; "How can we make the SAT and other such tests better?" we need to ask; "What kinds of measures will meet our needs now and in the future?" The purpose of this chapter is to present the underlying logic and research supporting a method that yields such measures. We do not need to ignore our current tests, we need to add some new measures that expand the potential we can derive from assessment.

Noncognitive Variables

Noncognitive is used here to refer to variables relating to adjustment, motivation, and student perceptions, rather than the traditional verbal and quantitative (often called cognitive) areas typically measured by standardized tests (Sedlacek, 1998a,b;2004). While noncognitive variables are useful for all students, they are particularly critical for nontraditional students, since standardized tests and prior grades may provide only a limited view of their potential. Below is a discussion of the eight variables recommended to be included in admissions assessment systems (see Exhibit 1).

Exhibit 1
Description of Noncognitive Variables

Variable #	Variable Name
1	Positive Self-Concept <ul style="list-style-type: none"> • Demonstrates confidence, strength of character, determination, and independence.
2	Realistic Self-Appraisal <ul style="list-style-type: none"> • Recognizes and accepts any strengths and deficiencies, especially academic, and works hard at self-development. Recognizes need to broaden his/her individuality.
3	Understands and Knows How to Handle Racism (the System) <ul style="list-style-type: none"> • Exhibits a realistic view of the system based upon personal experience of racism. Committed to improving the existing system. Takes an assertive approach to dealing with existing wrongs, but is not hostile to society, nor is a "cop-out." Able to handle racist system.
4	Prefers Long-Range to Short-Term or Immediate Needs <ul style="list-style-type: none"> • Able to respond to deferred gratification, plans ahead and sets goals.
5	Availability of Strong Support Person <ul style="list-style-type: none"> • Seeks and takes advantage of a strong support network or has someone to turn to in a crisis or for encouragement.
6	Successful Leadership Experience <ul style="list-style-type: none"> • Demonstrates strong leadership in any area of his/her background (e.g. church, sports, non-educational groups, gang leader, etc.).
7	Demonstrated Community Service <ul style="list-style-type: none"> • Participates and is involved in his/her community.
8	Knowledge Acquired in or about a Field <ul style="list-style-type: none"> • Acquires knowledge in a sustained and/or culturally related ways in any field.

Positive Self-Concept

There is evidence that the way students feel about themselves is related to their adjustment and success in college (Sedlacek, 2003, 2004). A strong self-concept is particularly important for students of color, students with disabilities, and women returning to school.

A number of studies have shown that a positive self-concept correlates with college grades, retention, and graduation, particularly the later two, for regularly admitted African American students. O'Callaghan and Bryant (1990) found self-concept important for the success of Black American students at the U. S. Air Force Academy. A positive self-concept has also shown to be important for Asian and Pacific Islanders, Latinos, international students, and women, among others, (Ancis, Sedlacek, & Mohr, 2000).

Realistic Self-Appraisal

Realistic self-appraisal is the ability to assess one's strengths and weaknesses and allows for self-development. Realism in self-appraisal by nontraditional persons does not connote cultural, racial, or gender deficiency or inferiority.

White students may do well pursuing their own interests (internal control) in a society designed to meet their needs, while students of color need to also be aware of the external control on their lives which requires them to negotiate the racism in the system (Sedlacek, 2003, 2004, 2005). Perceived intrinsic interest in a field has been shown to be a major barrier to achieving career goals for Whites and Asian Americans, while African Americans, Latinos, and Native Americans cited personal finances as their major barrier.

Realistic self-appraisal has been found to correlate with college grades, retention and graduation for students of all races, but the relationships were particularly strong for African Americans. Women who are able to make realistic self-appraisals have been shown to get higher grades in a university than those who have difficulty with such assessments (Sedlacek, 2004).

Understands and Deals with Racism

The successful nontraditional student is a realist based on a personal experience with discrimination; is committed to fighting to improve the existing system and is able to handle a racist system. Institutional racism is defined as the negative consequences that accrue to a member of a given group because of the way a system or subsystem operates in the society (e.g., college admissions) regardless of any other attributes of the individual (Sedlacek, 2003, 2004). Racism can take many forms and is used here to cover all types of "isms" (e.g., sexism, ageism, athleticism). While racism can be "individual" rather than institutional, the primary concern here is for dealing with the policies procedures and barriers, intentional or not, that interfere with the development of people.

For traditional students, the variable takes the form of handling the system without the addition of racism (Sedlacek, 2003, 2004, 2005)). How one learns to handle the circumstances with which they are confronted tells us much about their ability and potential.

Steele's (1997) work on "stereotype threat" supports the importance of the psychological set with which examinees approach a test. If African Americans are told that they do not usually do well on a test, they do less well than if a more positive set is given. Therefore, for African

Americans, the act of taking a test probably involves dealing with the racism that may have been involved in helping to create a stereotype threat in the first place. Hence, part of the variance that is being measured when an African American takes the SAT is likely to relate to how that person handles racism.

Prefers Long-Range Goals

Having long-range goals will predict success in college for students. Since role models often are more difficult to find, and the reinforcement system has been relatively random for them, many nontraditional students have difficulty understanding the relationship between current efforts and the ultimate practice of their professions (Sedlacek, 2003, 2004, 2005).

A significant relationship has been found between setting long-range goals and grades and retention for international students, including international community college students (Boyer & Sedlacek, 1988).

Availability of a Strong Support Person

Students who have done well in school tend to have a person of strong influence who provides advice to them, particularly in times of crisis (e.g., Sedlacek, 2003, 2004, 2005). This individual may be in the education system, but may be a relative or a community worker. Evidence is available for women, athletes of all races, and international students (Bennett & Okinaka, 1990). This variable involves having someone beyond a role model, although that may be part of the relationship. A strong support person takes an active role in advising and directing someone.

Successful Leadership Experience

Students who are most successful in higher education have shown an ability to organize and influence others. The key here is that nontraditional students may show evidence of leadership in different ways than their White counterparts (Liu & Sedlacek, 1999).

Asian American students have unique and culturally related ways of expressing their leadership. If an applicant succeeds in his or her culture and is now ready to "take on" college, there is evidence that the student has the potential to succeed. There is evidence of the value of leadership in the retention of Latinos and Native Americans, and African Americans in undergraduate and medical school programs (Webb, C. T., Sedlacek, W. E., Cohen, D., Shields, P., Gracely, E., Hawkins, M., & Nieman, L., 1997). Leadership has also been identified as a correlate of success for women for female and male international students (Sedlacek, 2004).

Community

Having a community with which students can identify, and from which they can receive support, is critical to their academic success. For White students, there tend to be a number of opportunities to find a community, in or out of school. The community for nontraditional students often is based on racial, cultural or gender-related variables. Students of color, women, and other persons with nontraditional experiences who are active in a community learn how to handle the system, exhibit leadership, and develop their self-concepts in such groups. For example, it has been found that African American students who used campus athletic facilities and certain student union programs were more likely to stay in school than those who did not (Mallinckrodt & Sedlacek, 1987).

Identification with a community has been shown to be important for Asian American, Latino, and Native American success in school, and for male and female athletes of all races. Community also has been shown to be a correlate of success for undergraduate women, teachers in training and international students (Sedlacek, 2004).

Nontraditional Knowledge Acquired

The ability of someone to learn from experiences outside the classroom correlates with their success in school. Persons of color are more apt to learn and develop using methods that are less traditional and are outside the education system. The methods may be culture or gender-related and the field itself may be nontraditional students, and women (Sedlacek, 2004). This learning should be demonstrated in an admissions or scholarship application, rather than just listed as a job or internship. Several schools and programs use this method of assessment as discussed below.

Measuring Noncognitive Variables

The Noncognitive Questionnaire (NCQ) was designed to assess the eight noncognitive variables discussed above and shown in Exhibit 1. (Sedlacek, 1996). Several forms of the NCQ have been developed and employed in different selection contexts 2-week test-retest reliability estimates on NCQ scores ranging from .74 to .94, with a median of .85 (Sedlacek, 2004). Inter-rater reliability on scores from the three open-ended NCQ items ranged from .73 to 1.00.

The variables shown in Exhibit 1 have been successfully assessed in ways other than a version of the NCQ. In the Gates Millennium Scholars program, a review of an entire application is

scored on the noncognitive variables, and makes up about 80% of the weight used in selection. The application includes short- answer questions based on each of the noncognitive variables shown in Exhibit 1, a personal statement by the applicant, letters of recommendation by the nominator and another person, and demographic, background, and activity questions. Raters were trained to identify and consider all this information in scoring each of the eight noncognitive variables. The raters were educators of color, familiar with multicultural issues in education, and in working with the kinds of students that were applying. Inter-judge reliability was estimated at .83 for a sample of raters in the first year (Sedlacek & Sheu, 2004). More than 11,000 Gates Scholars have attended more than 1450 different colleges and universities with a 97% first-year retention rate, an 87% five-year retention rate and a 78% five-year graduation rate. More than 60% are majoring in STEM (science, technology, engineering, mathematics) fields. Their Realistic Self Appraisal score has a significant relationship with their first-year college GPA and their Leadership score has a significant relationship with engaging in academic activities while in college.

Oregon State University (OSU) has developed a selection system based on the noncognitive variables show in Exhibit 1. The OSU application contains six short- answer questions which cover the eight noncognitive variables. Responses are limited to 100 words and are scored independently from other application materials. Raters from many parts of the campus are trained to score the six questions. Inter-judge agreement was estimated at 85. OSU uses its system in selection, academic advising, student services, on and off campus referrals, financial aid, and teaching. OSU noncognitive scores correlate with retention, and since employing noncognitive variables the OSU retention rate is higher, there is more diversity in the applicant pool and first-year class, campus offices are working better together, applicant GPA is up, referrals are better, and new courses and student services have begun based on the noncognitive information.

The noncognitive variables can be used along with any other variables, models, or techniques that are employed in whatever role or type of mentoring or advising is involved. Teachers, advisors, or counselors who use the system can expect to obtain better student outcomes in terms of grades, retention, and satisfaction, as well as greater satisfaction themselves in employing something systematic with demonstrated utility in an area that often produces confusion and anxiety. Sedlacek, Benjamin, Schlosser, & Sheu (2007) provide examples and case studies of how noncognitive variables can be used in postmatriculation or precollege programs.

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