

What More Do I Need Besides Grades, Test Scores & The Right Courses?

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Current Ability Assessment Issues

- Restriction of Range
 - Tests
 - Grade Inflation
- Courses
- Diversity
- Three Musketeers Problem
 - Range of Abilities



Sternberg- Intelligence Types

- **Componential**

Ability to interpret information hierarchically in a well defined and unchanging context. Standardized tests.

- **Experiential**

Ability to interpret information in changing contexts, be creative. Standardized tests DO NOT measure.

- **Contextual**

Ability to adapt to a changing environment, ability to handle & negotiate the system. Standardized tests DO NOT measure.

Noncognitive Variables

- **Self- Concept**

- **Demonstrates confidence, strength of character, determination, and independence.**

- **Realistic Self- Appraisal**

- **Recognizes and accepts any strengths and deficiencies, especially academic, and works hard at self-development.**

Recognizes need to broaden his/her individuality.

- **Handling System/Racism**

- **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.**

Noncognitive Variables (Contd)

- **Leadership**
 - **Demonstrates strong leadership in any area of his/her background (e.g. church, sports, non-educational groups, gang leader, etc.).**
- **Long- Range Goals**
 - **Able to respond to deferred gratification, plans ahead and sets goals.**
- **Strong Support Person**
 - **Seeks and takes advantage of a strong support network or has someone to turn to in a crisis or for encouragement.**
- **Community**
 - **Participates and is involved in his/her community.**
- **Nontraditional Learning**
 - **Acquires knowledge in sustained and/or culturally related ways in any field outside school.**

Advantages of Noncognitive Variable System

- Research based
- Multiple ways to assess
 - Questionnaire (structured-short answer), interview, essay, portfolio
- Retention related
- Considers diversity, US or international
- Tested legally
- Revise to fit situation-flexible
- No cost
- Student development
- Admissions, financial aid, student services, teaching, advising
- Community building
- High school counselors approve

Criticisms of Noncognitive Variable System

- “To avoid criticism, do nothing, say nothing, be nothing.” Elbert Hubbard
- Not a single “test”- many formats
 - College Board says invalid
 - Thomas et al (2007)
- Scoring not same for all
 - Three Musketeers
- May require some scoring time
- Easier to get grades & test scores
- Need to explain to some audiences
 - Parents, staff, faculty, alumni

Key Legal Cases



- Farmer v. Ramsey et al.- 1998
- Castañeda et al. v. U Cal Regents- 1999
- Gratz and Hamacher v. Bollinger et al., 2002, and Grutter v. Bollinger et al., 2002
- Fisher & Multer Michalewicz v. U of Texas- 2009
- Oregon State program cited as “best practice” by the US Office of Civil Rights

Fisher v. University of Texas et al.

June 24, 2013 Decision

- “A university must make a showing that its plan is narrowly tailored to achieve the only interest that this Court has approved in this context: the benefits of a student body diversity that ‘encompasses a broad array of qualifications and characteristics of which racial or ethnic origin is but a single though important element,’ ” wrote Justice Anthony M. Kennedy in support of a 7-1 decision that was sent down to a lower court for further review.

Gates Millennium Scholars -GMS

- African American, American Indian/Alaska Native, Asian Pacific Islander American, or Hispanic American
- Federal Pell Grant eligible
- Citizen/legal permanent resident or national of U.S.
- 3.3 High School GPA
- Curriculum Rigor
- Noncognitive Variables

A GMS award provides:

- Support by covering needs unmet by other financial options
- Renewable awards for satisfactory progress
- Option to transfer
- Graduate school in math, science, engineering, library science, education, and public health
- Leadership development program
- 1.75 billion dollar program

GMS Outcomes

- Over 15,000 Scholars funded
- Freshman retention 97%; sophomore 95%
- 5 year program retention rate 92%
- 5 year graduation rate 79% (53% all 4yr schools)
- 6 year graduation rate 90% (57% all 4yr schools)
- Scholar higher education GPA mean = 3.25
- Raters within each racial group trained to evaluate noncognitive variables -Alpha reliability = .92
- Scholars from 50 states & American Samoa, Guam, Federated States of Micronesia, Puerto Rico, Virgin Islands
- Scholars in over 1500 colleges and universities
- Scholars more likely to attend: selective, private, residential schools

GMS- Graduate Students

- + Realistic Self-Appraisal (GPA)
- + Leadership (positive experience)
- Had faculty as support person (positive experience)
- Perceived less discrimination (positive experience)
- 50% Education, 18% Engineering, 14% Science, 9% Public Health, 5% Computer Science, 3% Library Science, 2% Math

Top 10 Graduate Schools - GMS

<i>Rank</i>	<i>Inst_Name</i>	<i>Scholars</i>	<i>%AA</i>	<i>%AI</i>	<i>%AP</i>	<i>%HA</i>
1	Teachers College, Columbia University	21	38	0	24	38
1	University of California-Los Angeles	21	24	0	43	33
2	University of Michigan-Ann Arbor	14	43	7	29	21
2	University of Southern California	14	21	0	7	71
2	Walden University	14	93	7	0	0
3	Stanford University	13	8	0	23	69
4	New York University	12	25	0	0	75
5	Columbia University in the City of New York	10	70	0	20	10
5	Emory University	10	60	0	20	20
5	University of Oklahoma Norman Campus	10	20	60	20	0

Legend

AA- African American

AI- American Indian/Alaska Native

AP- Asian Pacific Islander

HA- Hispanic American

Some Additional Programs Using Noncognitive Variables

Washington State Achievers
Washington DC Achievers
Capital Partners for Education
Washington State University Pullman
Washington State University Vancouver
Univ. British Columbia Business School
Bowling Green State University
Montgomery College
Engineering Vanguard Program (NACME)
University of Central Missouri
DePaul University
Eastern Washington University
Colorado State University-pending
Linn-Benton Community College, Oregon
Central Oregon Community College
Linfield College, Oregon
Manchester College, Indiana
University of Nevada Las Vegas
George Fox University, Oregon
Goshen College
Big Picture Schools
University of Sydney
Assn of Coll Registrars & Admiss Officers
University of California-Davis

University of Northern Colorado
Texas A & M University
Louisiana State University
Boston College
Lehigh University
University of Michigan
Prairie View A & M University
University of Arizona
US Coast Guard Academy
Nagoya University
Samuel Merritt University
Douglas Cty Performance Lrng Ctr (GA)
Indiana State University
University of Washington Tacoma
University British Columbia Vancouver
University British Columbia Okanagan
Oregon Coast Community College
Northwestern College, Iowa
East Carolina University
Foundation for Educational Success
Jack Kent Cooke Foundation
Virginia Commonwealth University
Ten2One Leadership
Secondary School Admiss Test Board

References

- Bandalos, D. L., & Sedlacek, W. E. (1989). Predicting success of pharmacy students using traditional and nontraditional measures by race. *American Journal of Pharmaceutical Education*, 53, 143-148.
- Sedlacek, W. E., & Prieto, D. O. (1990). Predicting minority students' success in medical school. *Academic Medicine*, 3 (65), 161-166.
- Sedlacek, W. E. (1998). Multiple choices for standardized tests. *Priorities*, 10, 1-16.
- Sedlacek, W. E. (2004). *Beyond the big test: Noncognitive assessment in higher education*. San Francisco: Jossey-Bass.
- Sedlacek, W. E. (2004) Why we should use noncognitive variables with graduate and professional students. *The Advisor: The Journal of the National Association of Advisors for the Health Professions*. 24 (2), 32-39.
- Sedlacek, W. E. (2005). The case for noncognitive measures. In W. Camara and E. Kimmel (Eds.). *Choosing students: Higher education admission tools for the 21st century* (Pp 177-193). Mahwah, NJ: Lawrence Erlbaum.

References continued

- Sedlacek, W. E., Benjamin, E., Schlosser, L. Z., & Sheu, H. B. (2007). Mentoring in academia: Considerations for diverse populations. In T. D. Allen & L. T. Eby (Eds.), *The Blackwell handbook of mentoring: A multiple perspectives approach* (pp. 259-280). Malden, MA: Blackwell.
- Thomas, L. L., Kuncel, N. R., & Crede, M. (2007). Noncognitive variables in college admissions: The case of the noncognitive questionnaire. *Educational and Psychological Measurement*, 67 (4), 635-657.
- Sedlacek, W. E. & Sheu, H. B. (2008). The academic progress of undergraduate and graduate Gates Millennium Scholars and non-scholars by race and gender. *Readings on Equal Education*. 23, 143-177.
- Sedlacek, W. E. (2010). Noncognitive measures for higher education admissions. In P. L. Peterson, E. Baker, & B. McGaw (Eds.). *International encyclopedia of education Third Edition*. (pp. 845-849). Amsterdam, The Netherlands. Elsevier.
- Sedlacek, W. E. (2011). Using noncognitive variables in assessing readiness for higher education. *Readings on Equal Education*. 25, 187-205.