Character Skills Snapshot: Our Journey

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Outline

• Important Psychometric Concepts
• An Assessment Development Item Cycle
• Why Character Measurement Matters?
• CSS Development Journey
• Q&A
Best Practices for use of Admission Testing

1. What is the purpose of the test you are using?

2. Are you applying the same standard to all applicants?

3. What is the relationship between test scores and student success at your school?

The AERA, APA, and NCME produce, Standards for Educational and Psychological Testing, which outlines best practice and proper use of assessments in admissions.
Important Psychometric Concepts
Reliability

Reliability tells us that we are measuring something consistently!
Important Psychometric Concepts
Reliability (Cont.)

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY
Important Psychometric Concepts

Validity

If reliability tells us that we are measuring something consistently, validity deals with the issue of whether or not we are actually measuring what we want to measure!
Important Psychometric Concepts

Validity (Cont.)

Three Types of Test Validity

1. Content validity (Committees)
2. Construct validity (Research)
3. Predictive validity (Research)
Equating is an empirical statistical procedure used to adjust the form difficulty differences so that scores from different test forms have the same meaning and can be used interchangeably over time.
Assessment Development Item Cycle
Assessment Development Item Cycle

**Development**
- Item Writing by Content Experts
- Committee Review
  - Vendor Review
- Item Pretesting
- Item Analysis

**Assembly**
- Form Assembly
- Form Review
- Test Administration
- PIA/DIF/Equating
- Score Reporting
- FIA
- Post-administration

Revise → Pass
Why Character Measurement Matters?
How much variance is explained by a standardized cognitive measure?
Why Character is at the Forefront of K-12 Education?

1. Research linking non-cognitive attributes to academic success

2. Research linking non-cognitive attributes to work-life success

3. Promise of non-cognitive variables in promoting equity and access (particularly at the university level)
“What attributes do you look for on a candidate's resume?”

National Association of Colleges and Employers (NACE) 2015 Survey (260 Employers)

- leadership (78%)
- work in a team (78%)
- written communication skills (73%)
- problem solving (71%)
- strong work ethic (70%)
- analytic/quantitative (68%)
- technical skills (68%)
- verbal communication (67%)
- initiative (67%)
- computer skills (63%)
- flexibility/adaptability (62%)
- interpersonal (61%)
- detail-oriented (58%)
- organizational (42%)

**Boldface** are character skills

What is the research telling us?

• Poropat (2009, 2014)
  – Meta-analyses showing that character skills (especially Conscientiousness & Openness) predict educational outcomes from primary to higher education as strongly as cognitive ability does

• Applied Measurement in Education (Dec, 2016)
Why Character Assessment Has Been Elusive in K-12 Education?

1. Character skills difficult to define with precision
2. Measuring character seems a personal, subjective, and private endeavor
3. Further innovation in measurement development needed
Our CSS Journey- The Vision

• Provide schools with a more holistic profile of students- Cognitive+Character

• Identify character skills that are important to member schools

• Build a reliable and valid measurement tool to assess students’ character skills efficiently

• Create score reports that are easy to understand and to interpret
Our CSS Journey - What is it?

• **Constructs**
  – Intellectual Curiosity
  – Teamwork
  – Initiative
  – Responsibility
  – Open-mindedness
  – Resilience
  – Self-control
  – Social Awareness

• **Item Types**
  – Forced Choice (FC)
  – Situational Judgement Test (SJT)

• **Misc**
  – Unproctored
  – Approximately 30-minutes
CSS- Our Constructs

Skill Definitions

**Intellectual Curiosity**
Intellectual Curiosity refers to a student's interest in and enjoyment of activities that require a lot of complex thought. A student high in intellectual curiosity is eager to try new things and often pursues opportunities to learn more about something new on their own. They do not get discouraged when something is intellectually challenging.

**Teamwork**
Social competence refers to a student's ability to navigate social interactions, engage in supportive behaviors, and function in teams. A student that has strong teamwork skills, embraces conflict resolution, is open to ideas and opinions of others and can easily adapt to various group situations for effective collaboration.

**Initiative**
Initiative refers to a student's ability to take charge of a situation and initiate action without being prompted by others. A student high in initiative often shows an eagerness to start something and a willingness to accomplish tasks.

**Responsibility**
Responsibility refers to a student being accountable for their behavior. A student who is very responsible does all of the things they are supposed to do and accepts the positive and negative outcomes of their actions.

**Resilience**
Resilience describes a student's capacity to function effectively despite encountering difficulties or stressors. A highly resilient student successfully rebounds from pitfalls and failures. Students high in resilience also tend to perceive setbacks and weaknesses as temporary obstacles.

**Self-control**
Self-control describes a student's ability to control his or her thoughts, emotions, and actions. A student with high self-control has little difficulty controlling his or her impulses and temptations.

**Open-mindedness**
Open-mindedness describes a student's willingness to try new things and their receptiveness to new ideas. A highly open-minded student listens to others and has the ability to contemplate more than one viewpoint.

**Social Awareness**
Situational Competence describes a student's ability to identify context-appropriate behaviors. When presented with a situation, a situationally competent student will recognize what they should do to resolve the situation.
Forced Choice (FC)- Examples

1. I think of others first
   I am generally prepared
   I feel comfortable around people

2. I wait for my turn
   I sense other’s wishes
   I make plans and stick to them

**not actual items**
Your teacher has asked you to be the group leader for a team of ten students on a big after-school project in the school gym. Two of students have come to you complaining that one of the students has a habit of talking loudly on his cell phone while the group is working on the project. This happens so often that they feel it is interfering with their ability to get the project done.

**Which of the following is the best way to address the situation?**

A. Introduce a policy banning cell phone use while working on the team project. It is best to have a single standard for everyone.

B. Move the phone-using student to an area of the gym where no one will hear him. The fewer people that are bothered, the better.

C. Hang signs in the hallways reminding students to keep their voices down. Anonymous reminders avoid singling out any one person.

D. Approach the student privately and ask him to keep his voice down. He may not realize that his behavior bothers people.
Our CSS Journey (Cont.)

- **Summer 2014**: School Recruitment: 32 Schools
- **October 2015**: Follow-up Survey
- **Winter 2015**: Item Development
- **Fall 2012-Summer 2014**: Think Tank on the Future of Assessment Research
- **2014 Summit**: Discussion with G32 schools
- **January 2015**: ETS’ White Paper Based on the Survey Results and Theoretical Framework
- **May 2015**: Item Pretesting
Our CSS Journey (Cont.)

- **July 2015**: Presentation of Item Pretesting Results; Receive Feedback from Schools
- **Fall 2015**: Beta Stage: Field Trial of the CSA Prototype
- **Spring 2016**: Provide Results of Beta Stage to Schools
- **Summer 2016**: Tweak the Prototype (if needed) Based on the Beta Results
- **Summer 2017**: Collect Data at the End of 2016-2017; Conduct Validity Study
- **Fall 2017**: Test Rollout
Our Journey (Specific Activities)

1. **2012:** Think Tank of the Future of Assessment Research

2. **2014:** School Recruitment: 32 Diverse Schools (aka. G32)

3. **2014:** CSS Summit with G32 & ETS

4. **2014:** G32 Determined The Character Traits (Constructs)

5. **2015:** ETS White Paper- Based on Constructs and a Theoretical Framework
6. **2015**: ETS Item Development - Targeting 12 Constructs

7. **2015**: Item Pretesting

8. **2015**: Item Analysis - Exploratory Factor Analysis (EFA)

9. **2015**: Situational Judgment Test (SJT) Item Development by G32 Admission Professionals and Teachers

10. **2015**: CSS Summit with G32 & ETS
Our Journey (Specific Activities)

11. **2015**: Cognitive Labs w/ Students

12. **2015-16**: Beta Testing of Forced Choice Items (FC) and SJT Items

13. **2016**: Item Analysis- Confirmatory Factor Analysis (CFA)- Constructs Now 7!

14. **2016**: CSS Summit With G32Plus & ETS

15. **2016-17**: Field Trial of CSS Prototype
Our Journey (Specific Activities)

16. Spring 2017 - Collection of Preliminary Validity Evidence

17. Spring 2017 - Development of User’s Guide for Score Interpretation

18. Fall 2017 - Official Launch of CSS

19. Continued Collection of Validity Evidence and Refinement of Instrument....
“The underlying view of measurement in the MTMM analysis is that to measure a theoretical construct, different measures, each with its own bias, are selected. Bias that is due to method effects is reduced through a triangulation process” (Baron & Kashy, 1992, p. 170)
Questions?
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