

MEASURING YOUTH'S SOFT SKILLS ACROSS CULTURES:

EVIDENCE FROM THE PHILIPPINES & RWANDA

A new assessment tool called the Anchored BFI gives youth workforce practitioners statistically reliable data when measuring soft skills even across cultures, allowing institutions to more accurately see how youth progress as they move through workforce development programs, school systems, or government and employer training programs.

INTRODUCTION

Soft skills are widely recognized by the youth workforce development sector, employers, and educators as essential to success in the workplace. As the evidence for the importance of soft skills on the job continues to emerge, our attention must focus not only on how to improve youth's soft skills but on how to reliably measure them. The endeavor to measure soft skills in the international space is challenging: **how does one develop a reliable assessment of soft skills that can be adapted across global contexts without ignoring cultural differences and values of soft skills?**

To answer this question, Education Development Center (EDC), through Workforce Connections and in partnership with Professional Examination Services (ProExam) and Akilah Institute for Women, developed the Anchored BFI tool—a psychometrically sound, soft skills assessment appropriate for multiple developing country contexts.

The team based the new tool on the Big Five Inventory (BFI; Benet-Martinez & John, 1998) and added two question types to improve the tool's cultural adaptability and reliability: (1) anchoring vignettes and (2) situational judgment tests.

The new, Anchored BFI was implemented with out-of-school youth, secondary school students, and secondary school graduates in Rwanda and the Philippines to test the tool's reliability and validity.

WHAT IS THE BIG FIVE INVENTORY (BFI)?

Translated into over 28 languages, the Big Five Inventory (BFI) is a popular 44-item, self-report measurement instrument developed to measure an individual's Big Five skills (sometimes referred to as the "CANOE" skills).

BIG FIVE SKILLS OR "CANOE" SKILLS

Conscientiousness: One's propensity to organize and achieve. A conscientious person is likely to be on time, thorough, and hard working.

Agreeableness: One's positivity in interactions with others. People who are more agreeable are viewed as friendly or helpful, as opposed to "cold" or less friendly.

Neuroticism/Emotional Stability. One's ability to manage stressful situations or emotions.

An emotionally stable person is often less worried or depressed and can be less cautious than a less emotionally stable person.

Openness: One's capacity to enjoy "new" ways of thinking about the world. An open person may be highly open to new cultures or artistic experiences or to learning something new. This dimension is closely related to one's cognitive abilities.

Extraversion: One's propensity towards social interaction. More extraverted people are socially dominant and may tend toward sensation seeking, while less extraverted people are more reserved and less dominant in social situations.

Figure 1: The Big Five Skills



Much of the tool's popularity is due to the small amount of time required to complete the questionnaire as well as its psychometric qualities. The average reliability of the scales is around $\alpha = .80$, and the BFI has proven to be stable over time with a retest reliability of around .85. Items consist of short phrases, starting with "I see myself as someone who..." and ending with a prototypical Big Five trait marker (e.g. "is relaxed, handles stress well"). Every factor is measured by 8 to 10 items. Responses are given on a 5-point Likert scale, ranging from 1 ("disagree strongly") to 5 ("agree strongly").

WHAT ARE ANCHORING VIGNETTES?

Anchoring vignettes are a test item that corrects for cultural or contextual bias by allowing for the re-scaling of self-report items based on a respondent's ranking of hypothetical individuals who exhibit a soft skill to different degrees (see Hopkins & King, 2010; King, Murray, Salomon, & Tandon, 2004). Based on how a respondent ranks the individuals in the anchoring vignette, the assessor can gain an understanding of how that individual understands the most effective expression of a soft skill. The assessor can

then rescale the respondent's BFI answers accordingly, from a 5-point scale to a 7-point scale, so that the respondent's indication of his or her own expression of the skill is adjusted to fit within his or her understanding of the most effective expression of that skill (see Figure 2).

Tests to measure the improvement of the Anchored BFI over the original BFI revealed the adjusted version to be an improved version of the BFI in both Rwanda and the Philippines. Improvements occurred regarding the Anchored BFI's reliability, ability to discriminate levels of skill, predictive ability, and informativeness in both contexts. The application of anchoring vignettes, therefore, allowed the Anchored BFI to be adopted in different contexts with greater reliability than the original BFI.

HOW WE KNOW IT'S MORE RELIABLE

The tool's reliability improved after anchoring vignettes were added to the BFI. Cronbach's alphas (α , which indicate a test's reliability) for each of the Big Five Factors as measured in both Rwanda and the Philippines increased—past the acceptable threshold of 0.70—after

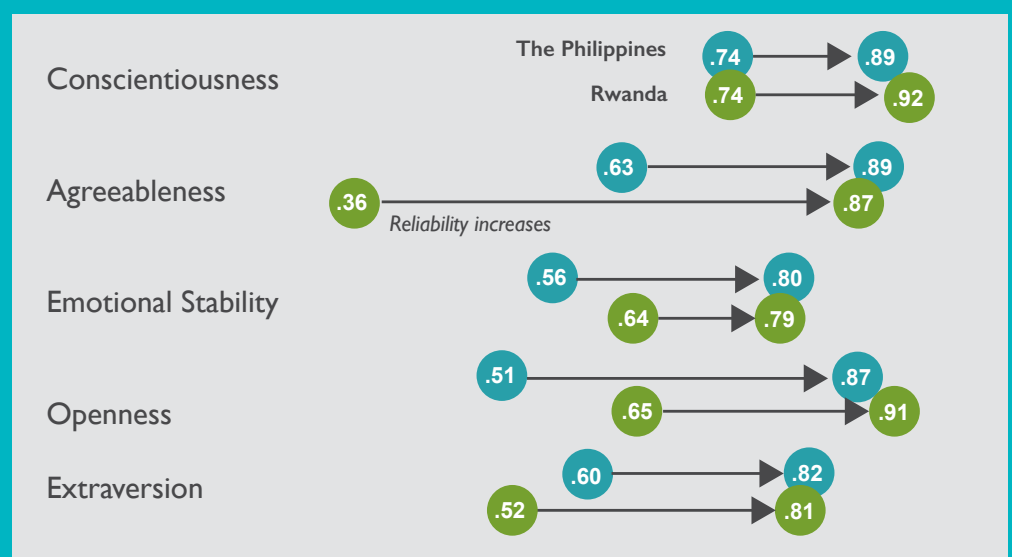
Figure 2: Sample Anchoring Vignette

Based on the below information, to what extent do you agree that this individual is conscientious/hard-working?

Disagree Strongly	Disagree a Little	Neither Agree nor Disagree	Agree a Little	Agree Strongly
Tony tends to be somewhat careless. Other workers comment also that he is lazy. Tony often also appears disorganized.				
Peter is a reliable worker and does all work with great efficiency. But he is easily distracted.				
Alice always does a thorough job. She perseveres until all tasks are finished. Alice also makes plans and follows through with them.				

Figure 3: Reliability Test for BFI with and without Anchoring Vignettes.

Cronbach's alphas are displayed for each Big Five Factor for the BFI with and without AVs in each country. The acceptable measure of reliability is .70 or higher.



the tool was adjusted (see Figure 3). Also, exploratory and confirmatory factor analysis revealed that, after adjustment, the self-report questions for each of the Big Five Factors better captured an individual's expression of that factor.

WHAT ARE SITUATIONAL JUDGMENT TESTS?

Situational judgment tests (SJTs) present a hypothetical scenario and ask the respondent to indicate how he or she would react (see Figure 4 for an example). While self-report questions like those in the BFI are vulnerable to faking, SJTs are harder to fake as the "correct" response might not always be obvious (Lipnevich et al. 2013). Nine SJTs, all of which test a respondent's conscientiousness, were tested in addition to the Anchored BFI.

Eight of the nine tested SJTs supported the BFI's self-report measurement of the Big Five Factors. The eight SJTs were reliable and had the expected negative correlation with counterproductive behaviors, such as skipping school or arriving to school late.

CORRELATIONS WITH EMPLOYMENT OUTCOMES

Data collected from unemployed and employed youth as well as employers roughly six months after the implementation of the Anchored BFI suggest the predictive validity of the tool. Employed youth's job satisfaction was positively correlated with their agreeableness as measured in the Anchored BFI, and unemployed youth's frequency of applying for jobs was positively correlated with both their total SJT score and their agreeableness.

The most meaningful follow-up data is the employer data, which is not subject to the same faking or social desirability biases (when respondents are influenced by societal/cultural standards of how they should respond) as the youth follow-up data. Even this data points to the predictive validity of the Anchored BFI, as employers report higher levels of teamwork for youth who score higher on agreeableness, higher levels of productive workplace habits for youth who score higher on agreeableness and on SJTs, and higher overall performance for youth who score higher on the SJTs (see Figure 5).

Figure 4: Sample Situational Judgment Test

You are working at a hotel when guests ask you for directions to a local restaurant. You are not sure of the exact location or the address of the restaurant, but you have a general idea of which direction it is in. You know that the restaurant is within walking distance. You have a lot of work you have to accomplish before going home for the evening. What are you likely to do?

Disagree Strongly	Disagree a Little	Neither Agree nor Disagree	Agree a Little	Agree Strongly
Point them in the general direction of the restaurant as quickly as possible so you can complete the rest of your work.				
Politely suggest that they ask someone else so you can get back to work.				
Find the address and also find a map so you can show the guests exactly where to go.				
Find a map and give it to them. Tell them this is the best you can do and get back to your normal work.				
Pretend not to be able to understand them so you can continue with your normal work.				

Figure 5: Correlation Between Youth's Skills and Supervisor Ratings





THE ANCHORED BFI IS A PROMISING TOOL WITH ESTABLISHED RELIABILITY, THAT CAN BE IMPLEMENTED ACROSS CULTURES TO MEASURE SOFT SKILLS, JUST AS RELIABLY AS IN THE UNITED STATES.

BREAKTHROUGH FINDINGS!

The improved ability of the Anchored BFI to measure youth's soft skills in two different contexts with reliability, discrimination, informativeness, and predictive ability suggests that this tool may correct for cultural bias in soft skills measurement. Such a finding is consistent with recent research conducted by organizations such as the OECD, and in tandem with our findings, this research appears to represent a series of breakthroughs for soft skills measurement in the international development sector. This Anchored BFI is a promising tool, with established reliability, that can now be implemented across cultures just as reliably as in the United States. The addition of situational judgment tests strengthen the tool's validity, regardless of cultural context.

The ability of the Anchored-BFI to measure soft skills across two different cultural contexts has the following implications for organizations and individuals involved in measuring youth's soft skills:

- Organizations can spend less time developing and testing context-specific, psychometrically sound soft skills assessments because the open-source Anchored BFI fills this need.
- Organizations can compare results of the Anchored BFI from context to context, allowing for increased learning about soft skills interventions, outcomes, and populations across projects.

Organizations are encouraged to begin using and analyzing their results from the open-source Anchored BFI presented here, as more data from the Anchored BFI in

additional contexts is necessary to establish the reliability of the tool across cultures. EDC, ProExam, and Akilah hope that this work can benefit all who are involved in delivering and measuring youth soft skills interventions. A more detailed report along with the Anchored BFI tool is available upon request. For further information or for a copy of the detailed report and tool, please email the Monitoring and Evaluation team at EDC at MandE@edc.org.

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