Evidence on the Reliability and Validity of IYF's Life Skills Survey Tool

Summary

In 2019, the International Youth Foundation (IYF) launched its new Life Skills Framework, a conceptual model that organizes 14 crucial life skills into four domains: positive mindset, higher order thinking skills, interpersonal skills and community mindset. The Life Skills Survey Tool (LiSST) was created alongside the framework to provide a method of measuring the life skills highlighted in the framework. The tool is a 49-question self-administered survey intended to measure life skills behaviors and attitudes. The LiSST was developed using a process of internal and external tool reviews, internal and external expert panel consultations, and youth focus groups. The tool was pretested with over 300 young people across the United States and demonstrated strong reliability and validity according to a variety of statistical indices. The LiSST is a promising new tool to measure changes in youth participants' life skills in a range of contexts to inform program improvement and assess impact. The tool has strong psychometric properties, which IYF will continue to test under new circumstances and with different populations.

Background

Life skills are foundational behaviors and attitudes that are positively linked to important life outcomes for youth including academic achievement, employment, and civic responsibility. The International Youth Foundation (IYF) has been a key player in the life skills space, offering thought leadership, and implementing effective experiential life skills programming for youth through its flagship curriculum, Passport to Success. In December 2019, IYF designed and launched a life skills framework to organize IYF's life skills work in order to:

· Enhance & unify communication around IYF's life skills approach and work
· Ensure comparable and comprehensive measurement of life skills across programs
· Guide program design & new life skills content development
· Drive IYF's thought leadership in the life skills space

The 14 life skills and corresponding four domains are displayed below.

IYF's Life Skills Framework
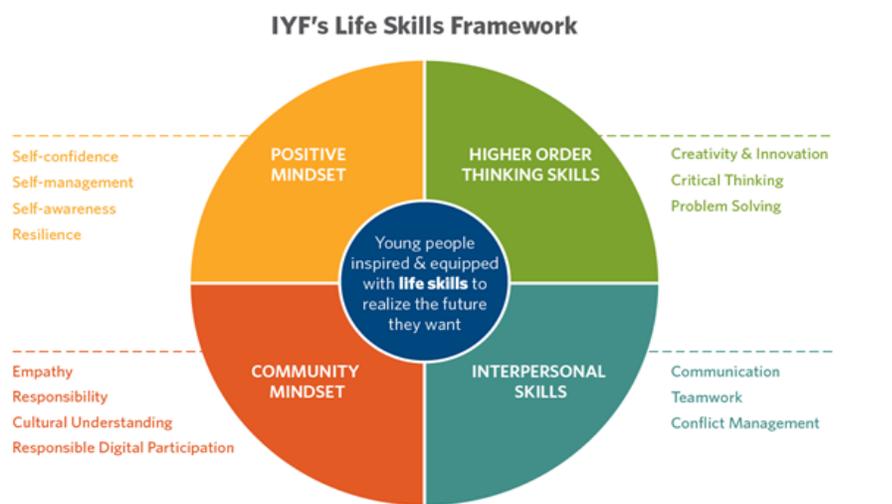
In conjunction with the life skills framework, a new life skills measurement tool, IYF's Life Skills Survey Tool (LiSST) was developed to reflect the life skills identified in the framework and provide a valid and reliable tool for measuring life skills both to improve programming and report progress on life skills gains.

Development

1 The development process began with a search of extant internal IYF tools for measuring life skills, including retrospective surveys and employer surveys used in previous IYF projects. Additionally, the YouthPower Action inventory of soft skills measurement tools[1], RAND Education Assessment Finder[2], USAID reports, and desk research were consulted to document a list of over 100 existing external life skills measurement tools.

2 Items from existing, free external tools were considered in addition to survey items developed by IYF in the past. New items were created to align with IYF's life skills framework. Items were adopted, adapted, or created based on a set of criteria such as sensitivity to change over time and suitability for participants in different age groups and contexts. A minimum of three items were developed or adopted for each skill to allow for reliability testing of the scale and all items were positively worded for ease of analysis.

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[1] https://www.youthpower.org/resources/measuring-soft-life-skills-international-youth-development-programs-review-and-inventory-tools
[2] https://www.rand.org/education-and-labor/projects/assessments.html

3 The final set of items underwent a series of content review with internal and external experts. IYF staff across the organization who had expertise in life skills were consulted along with external experts from Johns Hopkins University, Innovations for Poverty Action, Education Development Center, World Learning, and the World Bank. Items were revised based on feedback received from expert consultations.

The resulting survey tool consisted of 49 items organized into the four domains of the life skills framework, with 10 to 15 items per domain. The survey was designed to be administered before and after a life skills intervention or retrospectively depending on program needs to measure change in life skills behaviors and attitudes. See USAID's FAQs on soft skills measurement for discussion of pre-post versus retrospective survey administration.

Method

The finalized survey tool was pretested with **321 youth** between the **ages of 16 and 24** across the United States. Each of the 49 items were measured on a scale of 1-5 to create an overall domain score. Reliability and validity tests were conducted including examining Cronbach's alphas, interitem correlations, confirmatory factor analysis, and correlations with other variables.
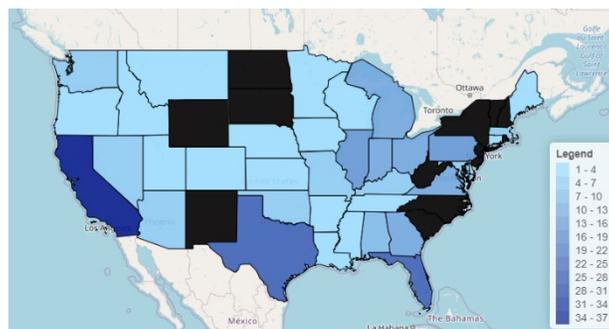

Figure 1. Map of youth participating in pretest survey. Darker shades signal relatively more participants from the state. Black denotes

Key Findings

- **Domain scores were reliable.** All domains demonstrated high reliability (>0.80) and interitem correlations (corr > 0.30) (See Table 1)

- **Domain scores were equitable.** No significant differences were found on average ratings across 4 domains by subgroup (gender, age, ethnicity, urbanicity, socioeconomic status) except for interpersonal skills scores, which were higher for females, and community mindset scores, where were higher for females and Latinx compared to Black respondents.

- **Domain scores were valid**. Confirmatory factor analysis (CFA) models fit the four specified domains as factors. Moreover, CFA run with each domain as independent factors also showed good fit. All factor loadings were significant and between 0.4 and 0.7. (see Table 2)

- **Domain scores were correlated with other characteristics:** Positive mindset was positively correlated with being employed and higher grades, and negatively correlated with being sad/depressed. Interpersonal skills and higher order thinking skills both were positively correlated with grades. (See Table 3)

Conclusions

The pretest results provided preliminary evidence of the reliability and validity of the LiSST. The tool is being translated and further tested in other contexts such as Mexico and Tanzania. More testing and data will provide greater confidence in the reliability, validity, and fairness of the tool.

As the economy and global priorities change, the life skills framework and corresponding LiSST may be updated periodically. The LiSST adds to the growing body of literature of life skills measures by providing a tool that is undergirded by a robust theoretical framework and initial evidence of reliability and validity.

If you are interested in using the LiSST, please reach out to Linda Fogarty, Director of Measurement, Evaluation, Research and Learning at l.fogarty@iyfnet.org.

APPENDIX

Table 1. Alpha coefficients and average interitem correlations for domain scores from pretest data

DOMAIN	NUMBER OF ITEMS	ALPHA COEFFICIENT	AVG INTERITEM CORRELATION
Positive Mindset	15	0.87	0.35
Interpersonal Skills	10	0.84	0.35
Higher Order Thinking Skills	12	0.86	0.35
Community Mindset	12	0.87	0.39

Table 2. Fit statistics and cut-off values for confirmatory factor analysis

FIT STATISTIC	VALUE	CUTOFF
RMSEA	0.05	<0.06
PCLOSE	0.43	>.05
CFI	0.85	>0.90
TLI	0.84	>0.95
SRMR	0.05	<0.08
CD	0.98	

Table 3. Odds ratios from logistic regression analysis of life skills domains' relationship with youth outcomes (only significant relationships of p<.05 displayed)

	Employed	In education	Grades	Sad/depressed	Fight
Positive mindset	1.19			-1.36	
Interpersonal Skills					
Higher order thinking skills	1.07				
Community mindset		-.93	-.78		
Age	.17	-.35			
Race/ethnicity					1.03 (Black more likely than Hisp)
Gender				.91 (Females more likely than male)	
Low SES				1.1	.83
Urbanicity					

*Note: Outcome variables were coded as follows: Employed = 1, not employed = 0, In education =1, not in education =0, B or higher grades = 1, C or lower grades = 0, sad/depressed in the last 6 months=1, not sad/depressed in the last 6 months=0, been in more than 1 physical fight in the last 6 months = 1, not in a physical fight in the last 6 months