Non-Cognitive Skills Assessment - Learnability Index (L I)

General Information	
Name of the Instrument	Non-Cognitive Skills Assessment Scale
Year and Version	2023, V 2
Description	A self-reported questionnaire-based instrument that assess the noncognitive skills significant in achieving academic success and career potential
Purpose	Designed to provide information that can be used as a • Predictive component for academic readiness, performance & employment potential • Diagnostic and counseling tool for Faculty/Mentors/Counselors • Evaluation mechanism for enrichment programs and the educational model • Assistive component in recommendations for higher education and employment
Main Constructs Assessed	LI is a summated score of constructs related to ***Individuality*** *of the person* and **E*xternal Factors*** that impact academic success. I. Individuality Factors – Traits that are characteristic of the individual nature of a person. Considered traits and what each reflects are 1. Attitude – interest/approach 2. Motivation – willingness to work towards goals 3. Confidence – belief in one's own ability 4. Resilience – ability to overcome setbacks 5. Study Strategies – usage of various learning techniques 6. Study Aids – effective usage of available resources including faculty/peer interactions, library/online resources etc. 7. Time management – organized usage of time II. External Factors – Variables that are external to the academic environment, but impacts performance 8. Peer Pressure Resistance – accounts for competition and comparison to peers 9. Addictions Resistance – accounts for addictive tendencies to Social media, Gaming, smoking and Alcohol/Drugs abuse 10. Family/Social Factors – reflective of family/friends support and values & traditions
Assessment Administration	
Respondents	Undergraduate College Students
Method of Administration	Computer based (Preferred) or Paper-Pencil
Number of Items	37
Item Format	Multiple choice, 4-point Likert-type scale with expected responses based on how well the statement describes the respondent
Administration Time	Less than 10 minutes

Scoring

Overall Score	Learnability Index (LI) which is a composite score of Individuality Factors and External Factors adjusted to a maximum of 100.
Sub-scores	10 Sub-scores indicative of each construct assessed can be provided in detailed score reports. Useful for designing interventional programs. These constructs are: Attitude, Motivation, Confidence, Resilience, Study Strategies, Study Aids, Time Management, Peer Pressure Resistance, Addictions Resistance and Family/Social Factors
Scoring Process	A score of 4 when the response to each item in the scale indicates positive outcome of the statement and 1 if the response indicates negative outcome of the statement.
Interpretive Information	Overall Score LI above 70, on a maximum possible score of 100, demonstrated substantial relation to academic performance based on our experimental studies with undergraduate students Sub-scores • Below 50% - Weak → Need immediate measures to improve these skills • Between 51-75% - Fairly good → Indicates room for improvement • Above 75% - Good → To be maintained

Evidence of Technical Quality

Test Population	Undergraduate Students in Engineering 1. Instrument validation data set size – 2000 plus 2. Career potential data set – 190 final year students in engineering from Computer Science and Information Science with available on-campus placement details
Reliability	Cronbach's Alpha
Associations	Bivariate Correlations
Dimensionality	Factor Analysis
Adequacy of data size	Kaiser-Mayor-Olkin (KMO) and Bartlett's Test

Related Research Publication

D. Suryaprasad, S. Jayadevappa and B. Shah, "Learnability Index – a Composite Measure for Non-Cognitive Skills Relevant in Academics," 2020 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE), Takamatsu, Japan, 2020, pp. 349-354, doi: 10.1109/TALE48869.2020.9368476.