Research Basis

Tucareers.com assessment is a research based framework and had been build on the O*NET content model (Peterson et. al., 1999). O*NET is an occupational database that provides detailed taxonomy of careers, attributes and data collated from several industries and individuals. O*NET is increasingly being adopted across the globe as internationalization and data driven career decisions becomes the new normal. Tucareers.com framework uses an analytics driven approach to enhance the use of O*NET in an international context (Bhatnagar 2017, 2018).

Given below the introduction to the various elements of the Tucareers assessment. Psychometric properties of the elements that we have designed or indigenized for international use are mentioned along with the references from the research conducted by O*NET.

Interests Indicate preferences for work environments. The O*NET taxonomy that is compatible with Holland's (Gottfredson & Holland, 1989) model of personality types and work environments is used. Six interest categories are used to describe the work environment of occupations: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Details on the reliability and validity (psychometrics) and design aspects of the instruments are available in Rounds et al. (2010). The interest assessment scale has been modified and reliability of the modified scale has been established.

Number of Items	Validity	Cronbach alpha
60	Convergent (.74 to .82)	Revised 0.76 to 0.84 (N = 726)

Work Styles are personality characteristics of an individual that can affect how well someone performs a job. The taxonomy of workstyle is assessed based on the O*NET taxonomy (Borman et. al.,1999) that is conceptualized utilizing constructs from personality assessment models like Five Factor Model, Big 5, Hogan etc. There are eighteen lower order constructs, organized under seven high level constructs that are measured in our assessments.

Number of Items	Validity	Cronbach alpha
72	Convergent and Divergent Validity Established by Correlating with Big 5 Traits	0.618 to 0.704 (N = 726)

Work values taxonomy used by us is based on the Theory of Work Adjustment (TWA) developed at the University of Minnesota (Dawis & Lofquist,1984). This theory proposes that job satisfaction is directly related to the degree to which a person's values and corresponding needs are satisfied by his or her work environment. The TWA identifies six primary work values each with a corresponding set of needs. McCloy et al. (1999) provides more details on the psychometrics and design of the instruments

Abilities are enduring attributes of the individual that influence performance. Our assessments use elements from the O*NET taxonomy that has comprehensively described these ability areas required across occupations based on Fleishman's extensive body of research (Fleishman, Quaintance and Broedling, 1984). Our assessments include 25 lower order constructs of abilities organized under nine higher order constructs.

Knowledge are organized set of principles and are gained through education and experience. The O*NET knowledge taxonomy (Costanza et. al., 1999) refers to 33 different knowledge areas and the self assessment measures the desired level for an individual and compares it against the requirement in different roles.

Skills are established procedures that lay the foundation to work with knowledge and is learned through experience and training. The Skills taxonomy we use is from O*NET (Mumford et. al., 1999) and split across basic and cross functional skills refers to 35 different skill areas. The self assessment measures the desired level for an individual on these different skill areas and compares it against the requirement in different roles.

References

Bhatnagar, M. (2017). Career guidance in India based on O* NET and cultural variables. *International Journal for Educational and Vocational Guidance*, 1-19.

Bhatnagar M (2018) Analytics Based Approach for Enhancing the Decision Value of O*NET and its Internationalization (Unpublished doctoral dissertation)

Borman, W. C., Kubisiak, U. C., & Schneider, R. J. (1999). Work styles. *In N. Peterson, M. Mumford, W. Borman, P. Jeanneret, & E. Fleishman (Eds.), The occupation information network (O*NET) (pp. 213-226)*. *Washington, DC: American Psychological Association*

*Costanza, D. P., Fleishman, E. A., & Marshall-Mies, J. (1999). Knowledges. In N. Peterson, M. Mumford, W. Borman, P. Jeanneret, & E. Fleishman (Eds.), The occupation information network (O*NET) (pp. 71-90). Washington, DC: American Psychological Association*

Dawis, R. V., & Lofquist, L. H. (1984). A psychological theory of work adjustment. Minneapolis, MN: University of Minnesota Press.

Fleishman, E. A., Quaintance, M. K., & Broedling, L. A. (1984). *Taxonomies of human performance: The description of human tasks*. Academic Press.

Gottfredson GD & Holland J (1989) Dictionary of Holland occupational codes (2nd ed). *Odessa, FL Psychological Assessment Resources*

McCloy, R., Waugh, G., Medsker, G., Wall, J., Rivkin, D., & Lewis, P. (1999b). Development of the O* NET computerized work importance profiler. Raleigh, NC: *National Center for O* NET Development.*

Mumford, M. D., Peterson, N. G., & Childs, R. A. (1999). Basic and cross-functional skills. In N. Peterson, M. Mumford, W. Borman, P. Jeanneret, & E. Fleishman (Eds.), The occupation information network (O*NET) (pp. 49-69). *Washington, DC: American Psychological Association*

Rounds, J., Su, R., Lewis, P., & Rivkin, D. (2010). O* NET® Interest Profiler Short Form Psychometric Characteristics: Summary. Raleigh, NC: *National Center for O* NET Development*

Peterson, N. G., Mumford, M. D., Borman, W. C., & Jeanneret, P. R. (1999). The occupation information network (O* NET). *Washington, DC: American Psychological Association.*