Chapter 70
Validation of Sherouk's Critical Thinking Test (SH–CTT)

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ABSTRACT

This study aimed to examine the psychometric properties (reliability and validity) of the Arabic version of Sherouk's Critical Thinking Test. This test has four parts, each of which provides a story that is divided into an introduction and a scene; each story is then followed by a list of sensitive questions featuring two response options (Agree/Disagree). A sample of 158 university students participated in this study. The results showed that the reliability of the entire scale was 0.885, and the reliability of each of its four parts was 0.885, 0.829, 0.772, and 0.721, respectively. Confirmatory factor analysis of the collected data revealed a good fit with the latent constructs (CMIN/DF: 1.446; CMIN/DF: 1.357; CMIN/DF: 1.417; and CMIN/DF: 1.151) for parts one to four, respectively. The test's adaptability was considered when designing this instrument, and examinees were invited to review it. This paper recommended using this instrument in the fields of performance, leadership, selection, training, and improvement, and it was also created as a tool to measure individuals' critical thinking skills and abilities in organizations, companies, and academic environments. The English and German versions of this test were also examined; these versions are now currently available for use.

INTRODUCTION

Critical thinking is "the process of evaluation or categorization…[involving] attitude plus knowledge of facts plus some thinking skills" (Russell, cited in Halpern, 2002, p.7). In brief, Russell developed an equation of critical thinking which, as confirmed by Halpern, is as follows:

Attitude + Knowledge + Thinking Skills = Intelligent Thinking

For this reason, experts recently agreed that critical thinking is one of the top skills required to succeed in both work and life in the 21st century (Trilling & Fadel, 2009 and Wagner, 2008); it is widely recognized as a necessary and essential skill (Abrami et al., 2008).

The evaluation of educational outputs is increasingly reliant on the ability to assess critical thinking skills as a primary indicator of either the successes or limitations of education systems. In fact, critical thinking skills are significantly valued in education, especially with respect to higher and professional education (Daly, 2001). This reflects the importance of creating and employing reliable instruments to measure this skill. However, recent studies showed that some of the famous instruments used to assess critical thinking have lacked psychometric phases, such as the ability to determine reliability and validity (Kardong-Edgren, Adamson, & Fitzgerald, 2010; Shin, Park, & Kim, 2015). Moreover, most of these instruments were developed for specific cultures, which led researchers to delete some of their questions/items to adapt these instruments to their respective cultures. This matter, as well as issues associated with translating the test into other languages, certainly affects an instrument's psychometric properties (Van Widenfelt, Treffers, De Beurs et al., 2005).

These issues were considered by the developer of the instrument presented herein, and thus the purpose of this paper is to subject the Sherouk-CTT to certain statistical analyses to examine the instrument's psychometric properties.

REASONS UNDERLYING THE LACK OF CRITICAL THINKING INSTRUMENTS

While critical thinking has largely been a point of focus in education over the last few decades, its definitions have yet to be standardized. The author postulates that the differences in perspective toward critical thinking, as rooted in culture, beliefs, purposes, concepts, etc., have influenced such variation. A study that investigated the ideas associated with critical thinking was performed by academics in the fields of history, philosophy, and cultural studies. The study showed that at least seven definitions of "critical thinking" were provided, which included judgment, skepticism, simple originality, sensitive readings, rationality, active engagement with knowledge, and self-reflexivity (Moore, 2013). In spite of this discrepancy, educators still use various definitions of this term to measure critical thinking skills. This is a point of concern, as being aware of this issue may prevent unreliable results from emerging when evaluating and measuring critical thinking; it is thus necessary to establish a working definition for this term as an initial and important step when measuring this construct. By examining the various definitions of critical thinking, various discussions can be held to try to link this skill to effective leadership, education, and constructivism. This study highlights that there is currently a lack of teaching methods that are rooted in deep knowledge; therefore, the authors concluded that university graduates lack critical thinking skills, which has led to the development of less effective leaders (Flores, Matkin, Burbach et al., 2012).

Conversely, the author of the current report recognizes that critical thinking should be regarded as a "regular type" of thinking, rather than a complex form of thinking, as described by Flores et al. (2012). Humans should use their minds to study information before believing it, and this should be the defining feature that differentiates humans from other creatures. Hence, critical thinking skills should be developed and enhanced in one's work and social life, and not solely in education. Promoting such skills in real-life situations ultimately helps increase students' ability to understand the core subjects in their curricula, and it also improves their ability to apply what they learned to real-life settings. Fur-

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