

Abstract

The presented habilitation thesis represents an annotated set of published studies generally focused on various approaches to psychological testing, such as item response theory, adaptive testing, innovative approaches to measuring specific capabilities or advanced statistical data processing techniques. The set of studies is thematically divided into two primary areas - methods and procedures used in personality assessment and methods and procedures in cognitive performance testing. In the case of personality assessment, research efforts aimed at the adaptation of widely used personality questionnaires grounded in the Big Five theory framework. In addition to the adaptation studies, the theoretical knowledge base in the field of measurement was enriched by studies exploring the possibilities of adaptive testing of personality characteristics, applying mathematical modeling to response strategies, as well as study proposing new statistical procedures for assessing the accuracy of measuring stereotypes in intercultural psychology. In the area of cognitive performance testing, three studies were devoted to spatial ability testing. One study described the process of development and psychometric evaluation of a multidimensional spatial reasoning test, the second one suggested novel, innovative item principles utilizing the advances of modern information technology, and the last one was investigating mental process involved in item responding strategies. The cognitive area ends with a study, which connects measuring cognitive abilities from the beginnings of scientific psychology to the present and focuses on the equivalence of measurement in the historical context.