

Computational thinking self-efficacy perception for progressive learning in malaysia: A study of validity and reliability

Abstract

Recently, researchers from various fields have argued that computational thinking (CT) skills are one of the most significant skills to have in 21st-century higher education; thus, this study was conducted to gather empirical data on the reliability and validity of the computational thinking self-efficacy survey (CTSe) in a Malaysian university setting. This study created a self-efficacy perception measurement tool to measure the CT self-efficacy based on the algorithmic thinking. A content validity testing to three CT content experts using content validity index (CVI) and exploratory factor analysis (EFA) were conducted to validate the CTSe items. A total of 127 university students participated in the CTSe survey via an online survey platform. The data gathered from the online survey were analysed for EFA and reliability analysis in order to study the CTSe's validity and internal consistency. Researcher foresees that this study can offer an insight into integrating the CT concepts in designing future learning materials.