Measuring grit among first generation college students: A psychometric analysis

The concept of grit is of interest in the field of education, particularly as it pertains to persistence to a 4-year college degree. This study offers an IRT analysis of the Grit Scale (Angela Lee Duckworth & Quinn, 2009; Angela L Duckworth, Peterson, Matthews, & Kelly, 2007) when used amongst first generation college students (FGCS) as well as recent first generation college graduates and non-FGCS recent graduates. The Grit scale was included in surveys administered as part of an array of other research projects within The Finish Line Project – a U.S. Department of Education First in the World grant funded project that seeks to improve FGCS access to, persistence in, and completion of postsecondary education through rigorous research into various programs and supports for FGCS’s.

A group of 155 FGCS’s currently enrolled completed the original 12-item Grit scale, 181 recent graduates who were FGCS’s completed a 9-item version of the scale, and 253 non-FGCS recent graduates completed the same 9-item scale. Reliability analysis, factor analysis, item response theory, and differential item functioning were used to analyze both versions of the Grit scale.

The reliability and validity of the Grit scale has not yet been analyzed for use with first generation college students, or with general research-1 university students. By comparing enrolled students and graduates, the psychometric analysis in this study offers insight into the measurement of student grit for use in support program development and policy-making to improve student retention.