

Constructing Homogeneous Likert-Type Summative Rating Scales According to Classical Measurement Theory

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ABSTRACT The study of human behaviour requires the use of valid and reliable instruments in order to quantify, analyse and interpret such behaviour. It is an accepted fact in research design that the reliability and validity of quantitative research depends on the reliability and validity of the instruments applied. Many researchers are hampered in their efforts to design quantitative research due to a lack of measuring instruments. Knowing the requirements for constructing Likert-type summative rating scales will greatly increase the reliability and internal validity of research projects. This paper offers the guideline for scale construction according to the model of Classical Measurement Theory as presented by Nunnally in the 1970s. This method of scale construction requires homogeneity of scale dimensions and applies item analysis as a measure of standardisation and not factor analysis as is the case with heterogeneous scales. In executing quantitative research, the statistical properties of scales should be scrutinised for their applicability. Researchers should take care when selecting scales in quantitative research and need experience in the methodological guidelines of scale construction. The writing of an item pool, the pros and cons of different numbers of scale steps and types of anchors are discussed with relevance to current literature. Determining the reliability and validity of a rating scale is clearly outlined. All applicable references regarding the elements of scale construction as posited by literature from the 1970s to the present (researching a time span of 40 years) have been consulted recounting the status of the Nunnally principles as they stand today.