

Quantitative Methods in Middle Grades Research: Developing a Reporting Framework

Robert M. Capraro
Texas A&M University

This special issue on quantitative methods provides an interwoven tapestry of insights into the reporting practices for middle-grades research. Each article is distinct but clearly builds on each other with clear connections where there are logical bridging ideas and techniques across quantitative methods. Based on what has been reported in the published literature for quantitative middle-grades research, the articles explicate possibilities for improving reporting and therefore, transportability and real-world applicability.

The purpose for this special edition is to provide a baseline for quantitative reporting and facilitate the accumulation of knowledge across studies for those who depend on this research to build or improve middle-grades programs. Specifically, the article by Bruce Thompson addresses practical significance and a clear understanding that blind and unqualified reliance on null hypothesis testing is not the best practice for applied middle-grades researchers. The article by Guili Zhang provides options for the most used statistical technique across *Middle Grades Research Journal* and *Research in Middle Level Education-Online*, *t*-tests. It builds on the Thompson article and describes options with practical and easy to follow procedures. The article by Susan Skidmore, explicates how to create, use, and interpret confidence intervals especially for effect sizes. It clearly, explains how using confidence intervals improves meta-analytic thinking and conveys information about statistical significance and so much more. Finally, it is practically important to provide analytic methods that go beyond univariate measures and analyses that simply report statistically significant independent variables. The final article by Z. Ebrar Yetkiner describes and provides the syntax for extending regression analyses for determining the variance contribution for each independent variable uniquely as well as all possible combinations in an analysis called commonality analysis. Additionally, a brief discussion describes how a multivariate technique, canonical correlation analysis, can be used to reduce the need for numerous univariate tests and provides a better real-world model where we expect events to be related.