Development of a summated scale for measuring approaches to assessment practice of undergraduate mathematics lecturers

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Findings associate undergraduate mathematics lecturers with surface and transmissive approaches to teaching. Apart from the recognized dominance of summative instruments, little is known about these lecturers’ approaches to assessment practice.

Early work in undergraduate science education led to the creation of a two-scale Approaches to Teaching Inventory (ATI) that was to be used to explore the relationship between approaches to teaching and other aspects of the teaching-learning environment. For similar purposes, basing our work on Samuelowicz and Bain’s (2002) framework for identifying lecturers’ approaches to assessment practice, we sought to develop a measure (S&B) that quantifies mathematics lecturers’ approaches to assessment practice.

An online survey was created using both the ATI and a newly created S&B questionnaire. Seventy mathematics lecturers responded. Results show that the S&B measure was significantly (p<0.01) correlated, in the expected directions, with both ATI measures. With the ATI as an established psychometric instrument, findings suggest the S&B measure has some validity and is measuring a similar underlying construct. We discuss these findings along with some of the limitations and problems identified by participants.