

MAE4051 Selected Topics in Educational Measurement – Response Processes Data in Assessment

Workshop Programme

This year the workshop will be delivered on-line. The workshop will take place over 5 days, from 10am – 4pm each day.

Each day in this workshop will begin with a short lecture. That will be followed with a discussion of the lecture topic. Each afternoon we will have an on-line discussion and some practical workshop activity which will include formative tasks.

The topics of the workshop are:

23rd November. Response Process Data in Assessment

The first lecture will provide a general introduction to the topic. We will explore the meanings and uses of process data in assessment, and present a working definition of assessment response processes, and process data. It will consider what is added by the use of process data, and what the risks and challenges are in its use. These will include a discussion of the challenges of validity, ethics, consequences and data security.

The afternoon practical task will ask you to identify, raise and solve problems about the practical, ethical, and consequential uses of process data.

24th November. Multi-Modal Data

The second lecture will discuss the idea of multi-modal process data - What is it? How is it captured and used. We will consider how process data evidence can be used to inform assessment design, to validate tests and items, and how it can extend our knowledge about respondent performance. We will look at how process data can reveal otherwise 'hidden' dimensions of assessment and latent variables. We will consider process data from log files, and from other sources, such as talk, eye tracking, cognitive interviews, gesture and facial expression.

The afternoon practical task will involve the development of a framework for the collection and use of process data for a particular assessment – to either support the validation of a test, or to extend the analysis of respondent performance.

25th November. Validity and Process Data

The third lecture will look at how process data can be used to a) validate test performance, and b) the arguments, theory and evidence that are required to validate the interpretation and use of process data. We will consider validity arguments, threats to validity, and the consequence and risks involved in the use of process data.

The afternoon practical task will involve developing and presenting a validity argument for the collection, interpretation and use of process data for a particular test or item.

26th November. The Digital Transition

The fourth lecture will examine the implications of the transition to digital and interactive modes of educational assessment. We will ask, what's different about digital assessments? How can process data be used to enhance their performance? We will look at how process data can be used to investigate mode equivalence, and what distinctive benefits can be gained from the use of process data in digital assessments?

The afternoon practical task will involve identifying how we can collect 'process data by design'.

27th November. **Next Generation Assessments**

The fifth and final lecture will look at 'next generation' digital assessments. Particularly those digital assessments that have dynamic, technology enhanced, and interactive designs. We will look at process-oriented assessment constructs, and the assessment of innovative domains such as problem solving and collaborative assessment tasks. How do these process-oriented designs construct the notion of respondent performance and test score? What opportunities and hazards to they involve?

The afternoon practical task will involve collecting, analysing and presenting process data.

Module Assessment

The learning objectives are:

- To understand the meaning and uses of process data in educational assessment.
- To critically analyse the benefits, challenges and risks of using multi-modal process data in educational assessment.
- To be able to develop and present a validity argument concerning the collection, interpretation, analysis and use of process data in assessment.
- Understanding about the role of process data in transitions to digital modes of assessment.
- Understanding of the roles and uses of multi-modal process data in the design and use of 'next generation' dynamic tests and items and innovative assessment domains.

Assessment Task 1. Portfolio log of the module activities and your learning.

The first assessment task involves completing a short, written portfolio to document your learning over the 5 day workshop. The portfolio should include a brief, critical and reflective written record of your learning on each of the workshop days, including brief documentation about each of the practical afternoon tasks and a brief self-assessment of your learning. The portfolio should be between 3-5 pages in length. You should use a first-person stance, and an informal writing style so that you can include personal reflections on your learning and activities. Examples of your class notes, practical tasks, and diagrams may be included.

Assessment Task 2. Essay on the Use of Process Data in Assessment.

The second assessment task is a short essay that provides a critical and evaluative commentary on the use of process data in assessment. The essay should use relevant literature and at least one example of an educational assessment to discuss the contribution, challenges, and risks of using process data to either a) improve the design of educational assessment, b) improve the validation of assessment performance, or c) to extend understanding of (construct relevant) respondent performance.

The essay length should be 4-6 pages (excluding the references list). Examples of test items or process data may be included as an appendix. It should be submitted in PDF format with a minimum of size 11 font with 3cm margins.

The Date for Submission of the Assessment tasks (via Inspira) is 29th January at 15:00.

The marks and feedback will be provided within three weeks of that date.