Editorial

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Welcome to the spring issue of *Research Matters*. We begin this issue with an article by Tim Gill in which he explores whether taking Core Maths qualifications (at age 16 to 18 years) may have benefits for students during higher education. Specifically, he analyses whether students who studied Core Maths and then went on to begin a degree course with a quantitative element, were less likely to drop out, and more likely to achieve a high degree classification, than those who did not take Core Maths. This follows on from Tim's article in our autumn 2024 issue.

Our second article, by Tom Benton, relates to using comparative judgement (CJ) to support decisions about setting grade boundaries. Awarding processes routinely involve experts' views on the quality of candidate work as one source of evidence and various piloting has explored the potential for CJ to provide this expert input. However, one obstacle is that CJ exercises are time consuming. Tom describes research exploring whether grade boundaries for a whole qualification could be determined based on a CJ exercise for just one exam component rather than needing CJ exercises for each exam component.

In our third article, Santi Lestari considers how certain features of exam question design could plausibly have implications for the accessibility of questions and explores the use of omit rates as a way to monitor for accessibility issues. Santi's analysis used science questions from 44 GCSE exam papers and compared omit rates for questions that required candidates to either create or augment a visual to those for questions that did not. More in-depth analysis also compared omit rates for these item types by other question properties (e.g., position within the exam) and candidate characteristics (e.g., attainment).

Finally in this issue, we have two articles focused on the annotations that learners make when taking exams. Joanna Williamson describes research in which she extracted images of annotations from large samples of GCSE Combined Science and GCSE Mathematics exam scripts in order to derive frequencies of learner annotations, types of annotations, and annotation heat maps (that provide a visualisation of the frequency of annotations in different locations on or around a question). Sylvia Vitello, Abdullah Ali Khan, Heather Mahy, Sarah Hughes and I describe research in which economics learners took a digital multiple-choice exam with access to either scrap paper or a print of the test. Aims included increasing our understanding of annotations and written markings that can support learner thinking during a digital exam and the role of accompanying paper materials. The findings from both these studies have potential implications for functionality within digital testing platforms.