

Exploring how the cognitive strategies used to mark examination questions relate to the efficacy of examiner training

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Paper presented at ECER Conference, Ghent – Belgium, September 2007.

Background

GCE A-levels and GCSEs are high stakes tests, which affect the life chances of thousands of people (mostly in the UK) hoping to proceed to employment or further study. Accurate marking of these qualifications is therefore crucial. Until recently, two areas of research into these issues were particularly under-explored:

- the efficacy of examiner training;
- the cognitive strategies used to mark examinations.

Baird *et al* (2004) and Greatorex and Bell (*in press*) undertook studies evaluating training efficacy for experienced examiners, exploring GCSE history and A-level biology respectively. When marks for the whole examination were considered, aspects of the training were found not to greatly improve average marking accuracy.

Suto and Greatorex (2006, *in press*) and Greatorex and Suto (2006) found that examiners used five different cognitive marking strategies to mark GCSE mathematics and business studies examination questions as well as A-level physics questions. They interpreted these strategies within dual processing theories of human judgement, which currently predominate in cognitive psychology.

Suto and Nadas (*in submission*) categorised these marking strategies as either 'simple' or 'more complex'. They found that after training, there were few differences in the accuracies of *experienced* and *inexperienced* GCSE mathematics and physics examiners. However, questions requiring apparently more complex marking strategies were marked less accurately than those requiring apparently simple strategies only.

We link these areas of research in this paper. Our aim was to explore how the apparent cognitive marking strategies used to mark questions relate to training efficacy.

Method

We re-analysed data from one study (Greatorex and Bell, *in press*) and present an aspect of the results from another study (Suto and Nadas, *in submission*). Both studies had a pre- and post- test design: the marking accuracy for every question was measured both before and after examiner training. Changes in marking accuracy were used as indicators of training efficacy.

In total, 57 examiners participated in the studies; in each study, all examiners marked identical samples of students' answers. The cognitive strategies apparently needed to mark each question were judged by researchers prior to conducting the statistical analysis.

Expected outcomes

We investigate the following hypotheses:

1. questions requiring only simple strategies will be marked accurately by all examiners both before and after training;
2. questions requiring more complex strategies will be marked less accurately than those requiring only simple strategies by both experienced and inexperienced examiners;
3. questions requiring more complex strategies will be marked more accurately after training than beforehand, by both experienced and inexperienced examiners.

References

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