The effects of the new modular GCSE examinations on students' outcomes, motivation and workload

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Abstract

1. Background of the topic

As part of the reform of 14-19 education, the national regulator in England has revised the subject criteria for GCSEs. One of the main changes to these qualifications is an increase in the number of unitised specifications.

Up to 2008, modular GCSE specifications were mainly confined to English, mathematics and science subjects but, since September 2009, almost all specifications are modular in structure, meaning that the GCSEs have assumed a form similar to A-levels, which have been modular since 2000.

The proponents of modular schemes have long argued for their advantages in terms of curriculum flexibility, short-term assessment goals, regular feedback and increasing motivation for students. Critics of the modular assessment claim that it leads to fragmentation of learning and over assessment. Furthermore, it is also being claimed that GCSEs are now easier to pass or to achieve a higher grade in and are becoming less demanding.

2. Research questions and/or focus of enquiry

This research was set out to provide evidence in relation to the above claims.

The main aim was to explore the differences in GCSE outcomes between candidates who took assessments in GCSE specifications in a terminal or linear approach and those who adopted a modular approach (taking units throughout the two-year course).

The research also investigated the effects of modularisation on students and teachers in terms of motivation and workload.

3. Research methods and/or mapping of literature

This work combined quantitative and qualitative research methods to address the effects of modularisation at GCSE level.

Descriptive statistics were used to investigate entry patterns for both assessment routes and regression analyses were carried out to explain the differences in attainment between linear and modular routes once the general ability of the students was taken into account.

Questionnaires and face-to-face interviews with students and teachers in three schools were carried out in order to collect data on motivation and workload. In particular, data on motivation was collected using the Intrinsic Motivation Inventory survey develop by Ryan and Deci

(undated) and perceived workload data was collected via a self-report workload survey in the form of a workload chart for students to fill in retrospectively.

4. Analytical and/or theoretical frame
Previous research has suggested that modular syllabuses work most successfully in subjects such as mathematics or physics and are less suited to subjects like English or modern foreign languages. Therefore, two contrasting subjects at GCSE level were selected for this research: English and mathematics. Examination outcomes in both subjects, both at specification and unit level, were obtained from the OCR awarding body. The data comprised students' details (name, sex, date of birth and school) and assessment grade details (session, tier, final mark and final grade).

In the quantitative strand of the research the outcomes of 42132 English students and 86268 students of mathematics were analysed. In the qualitative strand of the research, 62 students and two teachers of GCSE English (all in one school) and 61 students and two teachers of GCSE mathematics (grouped in two schools) took part.

5. Research findings and/or contribution to knowledge
This study provides evidence which informs the key points and public debates on modularisation and its effects.

Higher percentages of candidates entering for a GCSE in English followed a linear assessment route than a modular assessment route. In contrast, the majority of the candidates studying for a GCSE in mathematics followed a modular assessment route.

The quality of the entry in each of the assessment routes was different. GCSE English students following a linear assessment route had, on average, higher prior attainment (proxy for ability) than candidates following a modular route. Mathematics students following a linear assessment route had slightly lower prior attainment scores. After controlling for the students' ability, modular routes in English led, on average, to lower grades than linear routes. However, in mathematics, candidates following a modular route obtained, on average, higher grades.

Students taking unitised specifications in a modular fashion were motivated by frequent testing, and appreciated both the opportunity of re-sitting module exams and the feedback they received. In terms of their workload, students of modular mathematics experienced long periods of higher workload than linear students did in the first half of the year. For students of English, the workload varied considerably during the course of the year and there were no differences in linear and modular students' workload levels.

Teachers in the modular assessment system appreciated the better planning opportunity around the exams, the clarity of the focus of their teaching requirements and felt that modular assessment contributed to their approach to assessment for learning. They also appreciated the reduced stress of teaching in terms of not having to re-motivate students at the end of the year. Teachers in the linear route appreciated having more space and control to deliver the content effectively; furthermore, they did not find it a burden to revisit topics and re-motivate students before the end-of-year examination.