



Assessment as a driver for institutional transformation

Current challenges in higher education

Of the many developments taking place in higher education today, three stand out as being especially challenging (i) higher teaching workloads brought about by increasing class sizes and resource constraints (ii) the shift from teacher-driven models of learning to more student-centred models and (iii) the rapid pace of technological change.

A key question is how to manage these developments in a way that maximises benefit, not only to the student but also to the institution. Each of these developments - increasing workload, the changing role of the student in learning, and technological innovation - could be addressed separately. However, a more productive approach is to identify some key process within higher education that, if harnessed, could act as a lever to manage all three areas simultaneously. What would be the characteristics of such a process? Firstly, it should have a wide-ranging influence on educational, business and/or organisational activities. Secondly, it should directly affect the way teachers and students interact and hence the balance of responsibility for learning. Thirdly, the application of new technologies should produce positive benefits.

Assessment is arguably one such process: it is core to institutional functioning, it is the fulcrum that mediates teaching and learning relationships, and it could benefit from appropriate technology application.

Assessment as a driver for change

Everyone in HE is involved in assessment and it is the major bottleneck in relation to large class sizes. Whereas it is possible to achieve economies of scale in lecturing (through larger lecture halls) as far as traditional assessment practices are concerned workload (marking and feedback) is directly proportional to student numbers. Assessment is also the crucial interface between the student and the teacher or institution. One effective way of shifting the balance of power and responsibility, and of moving towards a more student-centred learning culture, is to redefine the role of the student in assessment processes. In addition, the application of new technology can help address workload issues and support shifts in student responsibility.

The Re-engineering Assessment Practices (REAP) project, funded by the Scottish Funding Council under its e-Learning Transformation Programme, has explicitly used assessment as the core driver for transformational change and as a way of addressing workload, the changing student role and the need to utilise new technology to best effect.

The REAP Project

The driving force for REAP has been the re-thinking of both the definition of assessment and the teacher-student relationship in assessment. Instead of viewing assessment as something the teacher does, assessment in REAP is conceptualised as a collaborative process where students share responsibility with peers, staff and the institution. A key assumption underpinning REAP is that students are already monitoring, self-assessing and regulating their own learning and that the purpose of HE is to build and strengthen this capacity. REAP takes a broad view of assessment, spanning formal and informal processes including self, peer and teacher feedback. A key goal of REAP has been to harness new technologies so as to support the kinds of assessment redesigns this new thinking requires, and to generate learning quality gains and efficiencies in contexts where there are large student cohorts.



Findings from the REAP project

The REAP project involved the re-design of 19 large enrolment first year classes supported by technology across three Scottish Higher Education Institutions. The student numbers per class ranged from 160-900 students with over 6000 students participating.

REAP has shown that when students are re-conceptualised as partners in assessment, and when technology is harnessed in the assessment design, significant learning and workload gains are possible even with large first year classes. How is this evidenced? When working in groups in online environments around structured but open-ended learning tasks, students have been shown to become more self-reliant seeking feedback and support from each other rather than just from the teacher. They invariably challenge each other and this promotes higher levels of individual learning while at the same time they also scaffold each other's understanding and development. By extending feedback, to include peer and self-generated feedback, the redesigns have shown that it is possible to reduce teacher workload without any loss (and sometimes an enhancement) in learning quality.

The Role of Technology

Technology has a dual role. It helps facilitates self-assessment and supportive social and peer processes, by providing students with familiar tools and flexible ways of interacting with each other and with learning resources. Technology also supports teachers by providing them with the ability to monitor group interactions as they happen online, and to intervene to clear up misunderstandings when required, but without providing unnecessary feedback or dominating discussions. This is a more economical use of the teachers' time and it helps avoid over-teaching, but it does require the careful design of learning tasks.

The Benefits of Redesign: some examples

In one first year Psychology class, a single teacher was able to organise rich and regular peer feedback to 560 students on a series of online essay writing tasks. This resulted in an increase in mean exam marks (from 51.1% to 57.4%) with some students producing work at second and third year standard. In another Engineering first-year class with 250 students, teachers were able to cut homework marking in half (a saving of 102 hours) by encouraging students to engage in self-assessment using an online homework system without any drop in exam performance. The time saved was used to increase personal tutor-student contact. These examples were effective because the sources of feedback were extended beyond the teacher through planned and carefully structured learning tasks.

In addition, in each design the application of technology was integrated, and aligned to the learning goals and purposefully used to create efficient uses of staff time. In the Psychology example, communications technology made it possible for a single tutor to monitor the progress of 86 online peer groups. In the Engineering example, all homework assessment was automated. These examples show the added value of the technology.

Conclusion

Overall, the gains from REAP are the result of the synergies deriving from the redesign of courses using a new assessment philosophy supported by innovative uses of new technologies. REAP has shown that it is possible to address workload, changing student roles and technological change in productive ways.

For more information see, www.reap.ac.uk

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