

Feedback in the context of high-stakes assessment

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Valorization

**Feedback in the context
of high-stakes assessment:
Can summative be formative?**

Relevance

The results of this research have significant social and economic implications. The traditional model of summative, end-of-year assessments, followed by resits for those who have not reached the required standard, is very expensive. This is particularly true in the case of the assessment of practical clinical skills, as they involve many senior clinicians, simulated and real patients, administrators, clinical equipment and a suitable location. If such assessments offer predominantly binary pass-fail decisions about results, ignoring the nuances of strengths and weaknesses hidden within the assessments, this represents poor value for money. Furthermore, the traditional model also has implications for society, as all learners who pass a summative assessment at the end of a medical undergraduate course are deemed safe to practise medicine, whatever flaws are hidden within the overall passing mark, as was outlined in Chapter 1.

This thesis sought to explore if these problems could be simply solved by providing cost-effective feedback to all students after summative assessments. A web-based portal provided a low-cost method of providing feedback to all students after summative assessments. As we demonstrated in Chapter 2, almost all students viewed the feedback. However, engagement with the feedback was typically very superficial and brief; this was particularly the case for students who had barely passed the assessment. Thus, although this method of feedback adds little to overall assessment costs, it fails to ensure that learners adequately engage with feedback.

The results of the studies described in Chapters 3 and 4 demonstrated that investing in improving the quantity and quality of feedback is unlikely to have much impact if it is given in the context of high-stakes assessments, as the summative assessment culture is so powerful and dominant that it hinders receptivity to feedback. However, the study in Chapter 4 demonstrated that feedback is valued if it is part of an appropriate assessment culture. Our research sought to clarify the elements of the assessment culture that are important for enhancing feedback receptivity. Some elements, such as mentoring, may present very significant up-front economic costs, but offer the potential for significant long-term savings, by intervening earlier in learners' careers and providing appropriately targeted remediation. Our research also calls for a move away from the traditional behaviourist approach to assessment, in which learners are rewarded for passing and punished for failing, towards a constructivist approach in which learners are much more active participants in the assessment programme. This represents a major change in society's attitude to assessment. The important lesson for cost-effective assessment design is that it is a waste of valuable time and money to simply superimpose a feedback mechanism onto a punitive, behaviourist assessment programme. Even apparently 'cheap' options are expensive if they have little benefit. Extensive redesign of the assessment culture may seem more costly but in the end should turn out to be substantially more cost-effective.

Target groups

The group who have most to potentially gain from this research is the patient community. The ultimate aim of this thesis is to improve patient care by fostering the development of doctors who are receptive to feedback, capable of interpreting it, then acting on it in order to address potential weaknesses in their clinical care. Patient care has undergone a paradigm shift in the last hundred years, from a culture in which patients were typically passive participants to one in which they are active consumers of healthcare, able and willing to challenge clinicians and express their own wishes. At present, patients have little involvement in the assessment of future doctors. It would be helpful for patients to have more insight into assessment processes; they may provide a way to challenge some vested interests within the academic and medical community. Our research has demonstrated that learners are more receptive to feedback when the assessment is more authentic, that is, more representative of real patient care.

Regulators of healthcare, such as the General Medical Council in the UK, should find the research findings interesting, if somewhat challenging. These regulators fulfil important roles in ensuring that entrants to the healthcare profession have reached a satisfactory minimum standard. Much of their focus has been on summative assessments as a way of reliably determining whether this standard has been attained. However, in recent years they have also focussed attention on the performance of existing doctors, ensuring that members of the profession are maintaining appropriate standards and continuing to learn throughout their career. Regulators may be unsettled by the notion that the summative assessments discourage engagement with feedback, especially among academically weaker learners. On the other hand, current programmes of appraisal and revalidation of existing doctors include many of the elements which encourage engagement with feedback. Elements include a significant degree of autonomy and agency and a focus on qualitative judgements rather than a numerical, reductionist pass-fail approach.

Students should also find the research findings relevant. Inherently, students want to become competent clinicians who will thrive in their chosen profession. They have a vested interest in successfully navigating the assessment programme, but also want to maintain their skills as doctors. It will be helpful for learners to understand the flaws in existing assessment programmes in order for them to support the paradigm shift needed in assessment culture. Academically weaker students, who just manage to scrape through programmes dominated by summative assessments, potentially have much to gain from this paradigm shift which would help them to engage with feedback. The study described in Chapter 5 demonstrated, however, that current students' beliefs about assessment culture are strongly influenced by their prior experiences and it cannot be assumed that they will automatically embrace a very different assessment and feedback culture. However, exposure to elements of a different assessment culture should support the drive towards change. Indeed, where assessment programmes have been radically changed in this way,

the students typically become strong proponents of the new culture. Ultimately, students will become the doctors, academics and even regulators of tomorrow, so it is important they understand and embrace the implications of this research in order to bring about the paradigm shift needed.

These results should also be of interest to those who organise assessment in postgraduate medical settings, such as, in the UK, the royal colleges. Their assessment programmes have been gradually moving to incorporate more workplace-based assessment and feedback. Trainees often view such assessments as summative hurdles to navigate, rather than learning opportunities. Such attitudes may at least partly be fostered by these learners' experiences in a summative assessment-dominated undergraduate system. Graduates from redesigned assessment programmes may therefore be better prepared to engage with opportunities in the postgraduate setting. However, royal colleges also need to ensure that they design their assessment programmes carefully in such a way as to support learning.

Although more research in other settings is clearly needed, the findings of this thesis should be of interest to those educating other students, whether in healthcare or elsewhere. Arguably, meaningful engagement with feedback should help in the development of critical thinking skills, which should have benefits for society as a whole.

Activities & Products

Our research findings, and the implications arising from them, should directly influence the redesign of assessment programmes in medical education. We have identified elements which should be included within assessment programmes in order to encourage receptivity to feedback and thereby enhance learning. The findings have already been begun to be incorporated into the author's own medical school, Keele University, UK, as it redesigns its assessment programme.

Many other medical schools are considering transforming their assessment programmes. To assist with this process, the findings have been disseminated through a number of presentations at international conferences, as well as invited talks at several UK medical schools. Chapters 2 – 5 have all been published in peer-reviewed international journals. At the time of writing, the study in Chapter 2 has been cited 29 times since its publication in July 2013. The study described in Chapter 3 has been cited 18 times and downloaded 1400 times since it was first published online in June 2014. In the 9 months since the study in Chapter 4 was published, it has been cited 7 times and downloaded 1400 times. In the two months since Chapter 5's study has been published, the article has been accessed more than 900 times.

Innovation

This research is innovative because there had previously been virtually no empirical work done on receptivity to feedback in the context of summative assessment. The findings clearly demonstrate how the powerful, dominant nature of summative assessments stifles the learning which could occur afterwards. Our research has been the first to uncover the elements within assessment cultures which help or hinder receptivity to feedback, and has clearly demonstrated the need to move away from a purely behaviourist approach to assessment in medical education to one which also incorporates many constructivist elements. This research therefore advances the field in a way which should have significant implications for all programmes which are dominated by summative assessments.

Schedule & Implementation

Dissemination of the research findings has already been taking place. In addition, plans to implement many of the findings are already well underway in the author's own medical school as it redesigns its assessment programme. It is likely to take some time for the ideas to be adopted on a wide scale. It is difficult to estimate costs at present as it is unclear whether there are immediate market opportunities.