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Article:

From testing recollection and knowledge to authentically assessing understanding and application: a case study at Level 4

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Abstract

Authentic assessment is increasingly prized in all tiers of education. In order to inform and facilitate the design of such an assessment strategy a number of authors propose criteria or models of design that the educator can apply to their particular programme.

In a review of the Level 4 module 'The Foundations of Radiographic Science' the current assessment strategy was found to test recollection and knowledge, but not to meet the criteria for an authentic approach. A revised assessment strategy was designed following the model proposed by the 2018 systematic review of Villarroel et al. This newly designed strategy was then appraised and subsequently refined by

application of other published criteria. Following this approach, the design was thus enhanced by elements of realism and evaluative judgement. The resulting proposed assessment strategy was finally reviewed according to the VARCS model (Valid, Authentic, Reliable, Current, Sufficient), in particular as embedded in the 'Keele Assessment Principles'.

This material was originally developed as a video presentation for an (authentic) assessment on a programme developing Teaching and Learning in Higher Education. It is offered in this original format as an illustration of the benefits of an authentic approach, with an accompanying narrative written from a personal perspective.

Keywords

Authentic Assessment; Assessment Design; Radiography; Video;

Authentic Assessment has long been discussed in the literature on healthcare education but particularly with a focus on the assessment of clinical skills and professional practices (Raymond *et al.*, 2013; Bradley and Schofield, 2014; Carter *et al.*, 2015; Poindexter, Hagler and Lindell, 2015; Chong *et al.*, 2016; Kelly and Mullan, 2018; van der Merwe, 2019). As a recent recruit to faculty after a career in the NHS as a radiographer I came with a passion for education previously expressed through training others 'on the job' and so instinctively understood the need for authenticity of assessment in that environment but was not familiar with the literature in that field.

As a novice lecturer the steep learning curve of practically facilitating learning in higher education needed solid theoretical foundations which, in accordance with Keele's policies, would need evidencing through fellowship of the Higher Education Academy and so I commenced as a student on Keele's MA in Higher Education Practice (MA HEP). The experience of being both student and lecturer simultaneously gave many opportunities for reflection on the processes of learning that could be applied directly to practice, and at the same time I was able to observe the practical application of the theories as they were modelled in the programme.

My particular responsibilities on the Radiography programme are focussed on the scientific knowledge that underpins practice, and the level 4 module I lead became my focus when I was asked on the MA HEP to apply theory to the design and development of a programme of learning. Teaching the module for the first time in its inherited format, and led by the MA HEP to reflect strategically on its strengths and weaknesses as well as on how my own personality and lecturing style interacted with the material and students, I identified a number of things that I wished to adapt in order to implement some of the learning theory, and the assessment strategy outlined in the video which forms the mainstay of this article was one of them.

To my knowledge the *authentic* assessment of the student's understanding of the foundational science of Radiography has not received much attention in the literature and so the challenge for me, as for students of any subject, was to identify the aspects of published theories that resonated with my context and to apply them effectively. The video therefore outlines an evidence-based process of design of an

authentic assessment strategy, situated firmly in my context. It will be clear that the specific innovations are not drawn from the literature, rather they are the product of my reflection and ideas generated spontaneously as a practitioner within my community of practice (Wenger, 1998). Instead, the evidence-based process of design is one of challenge and refinement of ideas. The resulting strategy is likely to be successful to a degree but will, undoubtedly, be flawed in some way. The reflection that generates these ideas is an ongoing and cyclical practice. When it is implemented and evaluated further reflection will no doubt generate further ideas for improvements which must then be implemented, evaluated and reflected upon.

It is worth saying a few words about the video format of this submission. I was initially hesitant about submitting in this format, being somewhat conventional in my approach to things, and you may be hesitant in considering it to be a valid format for publication. The material was developed as part of a formative assessment opportunity on the MA HEP and can be considered authentic in a number of ways which I hope will become apparent as the video discusses the criteria that make assessment authentic. It modelled for me how to include authentic assessment in a programme of learning, and in its development the real-world application of my learning was always at the forefront of my thinking. More importantly, it stretched my thinking about methods of assessment for my students. Whilst there was a requirement to produce in this format for participation in the in-house MA HEP conference, there was no absolute requirement to submit this video as part of the summative assessment, but the experience of creating it, and the realisation that it effectively evidenced my learning, has certainly broadened my perspective on appropriate ways to assess my students, especially in respect of the inclusion and widening participation agendas. Therefore, I have left the material in this format rather than write it up conventionally in the hope that its form might help to illustrate its message.

The applicability of the design process in the video to your own context will, of course, be variable and limited in some respects. It is a case study in design and not a complete theoretical discussion. Also, the resulting assessment strategy has not yet been implemented and evaluated. Nevertheless, I hope that the material presented here will provide some ideas, supported by the literature, if you wish to undertake your own redesign of assessment.

Video Presentation

To view the video, follow the link: <https://drive.google.com/file/d/1L76HCuKNcLv5yj-P6CAor8ssNtYzDoID/view?usp=sharing>

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