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DEVELOPMENT OF A KNOWLEDGE DEMONSTRATING/SHARING BLOG IN HEALTH-BASED RADIATION PROTECTION: EXPERIENTIAL LEARNING THAT LEVERAGES THE WEB 2.0 EXPERIENCE OF LEARNERS IN A COMMUNITY OF PRACTICE AND INFLUENCED BY PRESSURES OF THE COVID-19 PANDEMIC

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Abstract:

A new part-time, primarily distance learning apprenticeship degree programme was developed by the university based on the pressures of the COVID-19 pandemic: more radiographers (medical imaging technologists) are required in the National Health Service (NHS) in the UK (United Kingdom), and distance learning techniques that have been refined in the pandemic. A concern when teaching distance learners on a health-related degree in a higher education setting is the ability to put into practice that which is learned, and how to assess this experiential learning, especially in safety-critical environments. This study addresses this problem by demonstrating the value of student authored blogs on a virtual learning environment.

The study group are all full-time employed assistant practitioners in diagnostic radiography (x-ray technology) who are aiming to become registered health care professionals, diagnostic radiographers, in the National Health Service (NHS) through a part-time apprenticeship degree in diagnostic radiography. They are geographically dispersed throughout England.

All the students use x-ray equipment to examine patients, obtaining images of anatomical structures in the body. The statutory radiation protection regulations in the UK require the use of a quality assurance (QA) programme to ensure the equipment functions correctly and keeps the radiation dose to patients as low as reasonably practicable (ALARP). Students are required, as formative assessment, to undertake QA procedures, and write about their experiences in one blog entry. Emphasis is placed on collaboration with others in this endeavour, as students are expected to learn from experts in quality assurance in their home department.

The aims of the blog are:

- (i) to gain in-depth knowledge of quality assurance and present it effectively,
- (ii) collaborate with others in gaining this knowledge,
- (iii) share this knowledge with their peers,
- (iv) prepare students for their final, summative Objective structured Clinical Examination (OSCE).

Supplementing the presentation of their work as a written blog, students, selected at random were expected to outline their blog to demonstrate their understanding and to encourage discussion within the group and teaching staff. This was carried out using the Blackboard Collaborate virtual classroom.

Initial findings demonstrate that some students were quite perplexed when given this assignment, lying outside their prior experience of assessment during the course and requiring extra work in a tight timeframe. However, n=16/18 students produced a blog. Blogs were produced that used a variety of methods to demonstrate knowledge, including images from clinical departments where permission was obtained. Examples of blogs and their appraisal by teaching staff will be presented and further data will be obtained with a content (textual) analysis of responses to an online questionnaire of the students experience of learning in this novel way.

The study was carried out with a relatively small group (n=18), and students having the same experience, at scale, may prove more challenging. In summary, this study demonstrates that students at a distance can use their clinical experience and be assessed on this vital area of experiential learning by using the blog. This has been framed by the response to the COVID-19 pandemic, emphasising the recruitment of more staff into vital roles in the health system by developing online learning technologies.

Keywords:

Computer supported collaborative learning, undergraduate, assessment, blog, experiential learning, Web 2.0.