

Abstract

The development and application of critical thinking skills is a requirement and expectation of higher education and clinical radiographic practice. There is a multitude of generic definitions of critical thinking, however, little is understood about what critical thinking means or how it develops through a programme of study. Diagnostic radiography students struggle with demonstrating this skill to the desired expectation, and in higher education, it is assumed that both students and tutors understand what is required in relation to this expectation. Drawing on the work of seminal authors in the field, this study explored radiography students' and tutors' understanding and perceptions of the meaning and development of critical thinking.

The research framework sits firmly within the interpretive paradigm and was designed as a longitudinal study conducted over the three-year programme period. Semi-structured face-to-face interviews were employed as the means of gathering context-rich information from diagnostic radiography students (n=13) and tutors (n=5) who were purposively selected to participate in the study.

Participants' understanding of the meaning of critical thinking shared similarity with published definitions. Although the demonstration of critical thinking skills is explicitly assessed on the training programme, the teaching thereof was found to be implicit within the curriculum. Student responses revealed that although university played an important role in knowledge generation, it was clinical placement that played the major role in the development of critical thinking skills and dispositions. A definition framework of critical thinking in diagnostic radiography is presented, show-casing the multi-faceted nature of critical thinking and recognising knowledge of the domain as its central feature. In addition, a progressive model of the development of critical thinking is presented. Although depicted as a hierarchical structure, the findings demonstrated that students' development of critical thinking evolved through a recursive and shifting process rather than a linear trajectory.

A number of challenges has been discussed in relation to the development of critical thinking which have pedagogical implications for the training programme, for example, student motivation and engagement, learner autonomy, guidance provided to students and tutor support. In addition, the inclusion of a repertoire of focused critical thinking learning and teaching approaches from Level four to Level six will foster the development of this indispensable skill. Through exposure to well-articulated critical thinking tools, as diagnostic radiographers, we will be lured into new ways of thinking that will render expectations of practice such as decision-making more robustly defensible in the changing context of autonomous diagnostic radiography practice.