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Partnerships for clinical learning: A collaborative initiative to support medical imaging technology students and their supervisors

A. Thompson [a, *], L. Smythe [b], M. Jones [c]

[a] Centre for Medical and Health Sciences Education, University of Auckland, Building 599, Level 12, Auckland City Hospital, Private Bag 92019, Auckland 1142, New Zealand
[b] Faculty of Health and Environmental Science, Auckland University of Technology, 640 Great South Road, Manukau 2025, Auckland, New Zealand
[c] Auckland University of Technology, Building WU, 46 Wakefield Street, Auckland Central, 1010, New Zealand

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ABSTRACT

Introduction: The involvement of practitioners in the teaching and supervision of medical imaging technology students is central to students' learning. This article presents an overview of a learning partnership initiative, reinforced by an online platform to support students' learning and their medical imaging technologist supervisors' (MITs) teaching within a clinical learning environment in a New Zealand context.
Methodology: Data were generated through a series of fourteen collaborative action research focus group meetings with MITs and student MITs.
Results: The findings revealed that a robust relationship between a student and their MIT partner gave students an 'anchor' for learning and a sense of belonging. The online platform supported the relationship and provided an effective means for communication between students and their MIT partners. The relationship was not one-directional as it also supported the enhancement of MITs' practice.
Conclusions: The recommendations from the study suggest learning partnerships between MITs and student MITs will be valuable in supporting teaching and learning respectively. MITs need to be better supported in their teaching role to enable them to make a greater investment in students' learning. A redistribution of funding for clinical education needs to be considered to support the MITs' central role in teaching medical imaging students.

Introduction

Medical imaging education is designed to enable student medical imaging technologists (MITs) to develop skills, attitudes and competence to become registered members of the medical radiation technology profession. Teaching of medical imaging students is undertaken by lecturers in the academic setting and by clinical tutors (who in this study were employed by the education provider offering the undergraduate medical imaging programme) and registered MITs in the clinical setting. Importantly, there is a marked reliance on the contributions of MITs to students' learning; however, in most instances they are not given the support or guidance to enable them to effectively fulfil their role.[1] Inadequate preparation of MITs for their role as supervisor/teacher was identified as a problem more than two decades ago.[2] In addition, in the late 1990s Baird[3] emphasised the critical importance of reflection for radiography students and argued that preparation of clinical staff was necessary for their role in teaching and supervision to enable them to assist to enhance students' reflective practice. In the absence of support to facilitate supervision, it is probable that experienced MITs' teaching is underpinned by history and traditions of the workplace, and therefore based on their prior experiences.[4] Therefore, MITs' teaching may not reflect contemporary educational approaches, such as student-centred learning with an emphasis on reflection and problem-solving to encourage deeper learning and understanding.

An initial exploratory study undertaken by the authors, which examined the experience of MIT students' learning and MITs' teaching, informed the development of an initiative to support learning and teaching in the clinical setting. The need for additional support for MIT students and their MIT supervisors was markedly emphasised. In the study reported here, a learning partnership

* Corresponding author.
E-mail address: Andrea.thompson@auckland.ac.nz (A. Thompson).

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initiative was developed collaboratively using an action research approach with a group of MITs and MIT students. The development of the learning initiative was informed by students and MITs' experiences. Students' experiences of learning should be valued and considered in planning teaching approaches and consideration must be given to the curriculum as 'experienced'.[5,6]

Literature review

There appears to be a lack of investment in preparing MITs for their role as teacher/supervisor. It is likely that the role of a teacher is an assumed role for a registered professional in a clinical learning setting. Further, despite the value and benefits of supportive partnerships for learning in health professional education,[7–9] little attention has been given to them in medical imaging.

The value of learning relationships

The relationship between a learner and supervisor is central to the supervisory process. Rogers[10] argues that a learning relationship is more important than other dimensions of learning, such as the skills of the teacher, books, and curriculum planning. It is important for students and teachers/supervisors to get to know one another, a process described by Paton[11] as "artfully connecting" (p. 145), requiring the supervisor to learn background information about their student, their previous clinical experience and academic requirements. For a supervisory relationship to be effective, several conditions should be met. These include maintaining the relationship over time; allowing the student/trainee to have some control over the supervision; trust; feedback; and engagement in reflection by both the supervisor and the student/trainee.[12,8]

An effective one-to-one relationship provides a student with valuable support for their learning,[13,14] enabling quality time with an experienced professional as the student develops professional skills. Medical students' motivation and participation was increased when they were learning alongside a supportive professional.[15] Being recognised as a 'partner' by a supervising radiographer was important for students in a study that investigated supervision of radiography students.[2] A partnership encouraged personal growth, discussion, and a rapport, which enabled students to learn from their mistakes. However, although MITs are responsible for students, their primarily responsibility is to patient care, and management of the workload. Further, the relationship between an MIT and student will never be equal as the MIT will have experience, a qualification and affiliations in the workplace that a student has not yet acquired. Therefore recognition of the student as a partner may reduce the power differential between the learner and supervisor. That is, a robust person-to-person relationship should be developed to attempt to remove the hierarchical nature of the traditional teacher/student relationship.[10]

The challenges of learning relationships

Conversely, ineffective relationships can be detrimental to students' learning. The competing demands of the workplace, with the priority of ensuring that the work is done, and patients receive a high standard of care, means that one-on-one time with a supervising practitioner may be a luxury. Without support in changeable clinical settings, students might become unmotivated.[15] Clinical settings can be frequently uncertain due to variations in workload and patient presentation. Therefore, support is particularly important for learning in a potentially unpredictable environment. In the absence of support, students may 'lose their way' and valuable learning opportunities may be lost.

A study, which examined the clinical learning experience for nursing students, identified that it was problematic for the student if a relationship was not developed.[16] If supervisors did not know the students, they did not rely on them, which had negative implications for students' learning. Further, insufficient supervision and disinterested supervisors also affected students' learning. Intimidation by staff, too much supervision and unhelpful reactions by staff were amongst the stressors highlighted in a study of radiography students.[17]

Learning relationship and belongingness

The support provided by one-to-one relationships is likely to foster a sense of belonging. A study of nursing students[18] demonstrated that "belongingness is mediated by a range of individual, interpersonal, contextual and organisational factors" (p. 106). The authors further reported belongingness for students was influenced by a sense of feeling safe and comfortable, enhancing students' self-efficacy and self-concept, motivation and engagement in learning opportunities. Having the capacity to engage in learning opportunities meant that they had "a legitimate place in the nursing team"[18] (p. 107). If belongingness was not attained, students were affected negatively, resulting in anxiety and limited confidence to become involved. They became more concerned with 'fitting in' than learning.

Context

The undergraduate degree programme associated with this study is a three year programme with an annual intake of approximately forty students. The intake comprises both school leavers who have achieved appropriate grades in relevant subjects in the final year of school and mature students (20 years+) who present with either a completed undergraduate or postgraduate degree or some robust evidence of previous successful study. Six clinical sites (4 metropolitan hospitals and 2 private radiology groups) offer placements for the cohort and students remain at a designated clinical site for the duration of the programme unless the site is unable to provide all the experience required. For example, if a site does not manage major trauma patients a student will be transferred to another site (for example, a large metropolitan hospital) to gain experience in this area. Students in this study were based at a large metropolitan hospital. Clinical learning involves general radiography, including computed tomography. In New Zealand, a postgraduate diploma is required to practice in magnetic resonance imaging, ultrasound and mammography. However, students spend time in these specialty areas during their undergraduate programme. During the first two years of the degree, students spend three days each week in the academic setting and two days in a designated clinical environment (for 26 weeks). In the final year of the programme students spend three days in the clinical learning environment and two days in the academic setting. In addition, students complete a minimum of nine weeks of clinical experience during semester breaks. Clinical assessment occurs within a clinical setting and involves a combination of ongoing formative assessment and summative assessment (competency-based assessment and Objective Structured Clinical Examination).

Methods

An action research approach was employed in this study, involving iterations of stages or cycles in which a problem was defined, an action planned, and the action then performed and evaluated.[19–21] Therefore, action research develops through a self-reflective spiral of planning, action, observation and evaluation.[21,22]