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Work-based learning and role extension: A match made in heaven?

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Abstract This paper presents, and discusses the findings from an exploratory study which examined a cohort of postgraduate therapeutic radiographer students' experiences of undertaking work-based learning to support role extension.

The findings showed that three themes emerged which impacted on individual experiences: organisational issues, role and practice issues related to competence development and the individual's background and experience.

The conclusions are that new models must emerge, and be evaluated, to offer appropriate support to those individuals who demonstrate the skills and ability to progress to advanced and consultant levels. Departments need to deliberate how they can effectively introduce and support role extension, giving specific consideration to study time, the number of higher level practitioners in training, as well as how to offer effective clinical supervision. Collaboration between higher education institutes and departments should enable the development of tripartite agreements to facilitate effective support for the learners.

Introduction

Currently there is a gap in knowledge regarding therapeutic radiographers' experiences and perceptions of role extension, in particular how individuals in training roles are supported in practice. Collaborative delivery of education and training between radiotherapy departments and academic institutions is one way of supporting the education and training for extended role practice.[1,2]

One definition of collaborative provision is where the university awards credit to another organisation (in this case the radiotherapy departments), and then the departments are responsible for the design, delivery and assessment of the programme as well as student support. The university's role is to validate the programme and check and assure that academic standards are met. This raises questions around how effective this is as a model to support training for therapeutic radiographers in extended role practice.

The author of this article was responsible for a number of collaborative partnerships over several years, and anecdotal evidence suggested that individuals faced

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difficulties trying to acquire skills and competencies in the workplace alongside the academic work. This anecdotal evidence, combined with the imminent dissolution of the collaborative partnership framework in the author's university, encouraged the author to explore these issues further and to evaluate current students' experiences. The intention was to use the information gathered to inform the development of effective support strategies for students in the MSc in Advanced Practice which was replacing the collaborative provision.

This paper will present, and discuss, the findings from the exploratory qualitative study, and interweave this with a literature review.

Literature review and background

Despite the exponential growth of cancer care initiatives, radiotherapy services are struggling to meet waiting targets.[3] Although funding has risen by 27% in three years, and the patient experience is getting better, there are still improvements to be made and capacity still needs to increase.[4] There is still a large gap (63%) between current activity levels of radiotherapy and optimal treatment levels, and it is projected there needs to be a 91% increase in activity to meet demands by 2016.[5]

The National Radiotherapy Advisory Group (NRAG) report (2007) and the Cancer Reform Strategy (2007) acknowledge that 20% of radiotherapy work is complex and should be completed by an oncologist; however the majority of work (80%) is routine and could be managed by a therapeutic radiographer in an extended role. The positive impact on waiting times could be immense, and a recent professional body survey shows that numbers of extended role practitioners are gradually increasing, with many departments making strategic plans to increase numbers further over the coming years.[6]

These individuals need to acquire a different set of clinical skills and competencies which require the building of a new professional knowledge base. The literature indicates this may create tensions and dilemmas[7–11] and problems experienced in the work environment can become compounded, thus highlighting the necessity for effective support mechanisms. Models of education, training and support for role extension vary, and range from ''in house training'' which is individual to each department, to traditional taught didactic or distance learning MSc modules, as well as a blended learning approach which combines work-based learning and taught modules.[1] Educational pedagogy has debated the most effective ways to facilitate the learning and development of adults and professionals. One approach is the use of work-based learning, which is derived from the premise that learning must be of value to the individual and relevant to practice. All the education and training is placed in the work environment rather than an academic institution. It moves abstract classroom hypothesis into practice and utilises real life situations, which are crucially linked to contemporary theory, thereby facilitating the empowerment of individuals to make informed judgements.[12] As professional development for role extension needs to facilitate the evolution of the expert practitioner, it needs to enhance the development of clinical knowledge, by acquiring skills and competencies which are grounded in problem solving. Arguably this can only realistically be delivered in the clinical environment. What is not yet established is how effective this model of work-based learning is. Does it work in practice, and how can individuals be supported to make the learning effective?

The primary research questions were as follows.

1. How are skills and competencies enabled, and supported in the workplace?
2. What are the barriers (personal professional and organisational) to skill and competence development in the workplace?

Methodology and method

Although not a pure grounded theory study, many of the principles associated with this methodology have been adopted in the data collection and analysis. For example the interviews were transcribed and analysed prior to the next interview, which enabled emerging themes to be checked out with the participants, and informed the development of nascent ideas.[13] Interview transcripts were analysed using thematical analysis, initially using first level coding, which looked at words and then sentences to identify meaning. These were then grouped together into categories and themes.

Purposive sampling was used, and all students undertaking the workbased learning modules were invited to participate. Written consent was sought and semi structured interviews (a mixture of face-to-face and telephone interviews) were undertaken to ascertain participants' perspectives and experiences. The interviews were taped and transcribed, and the transcripts were offered back to the participants for validation.

Seven students volunteered and practitioners from six different hospitals were interviewed; these ranged from small rural departments to larger urban teaching hospitals. There was a range and diversity of practitioners interviewed

- 2 Breast mark up
- 2 Palliative mark up
- 1 Gynaecological specialist.
- 1 imaging radiographer (portal image review)
- 1 patient assessment and review.

Findings

The themes identified are listed in Table 1

Discussion of the emergent themes and links to the literature

Organisational resources

This study has found that staff shortages had a deleterious impact on acquiring clinical competencies and getting access to previously agreed study time. Some students also

Table 1 The emergent themes.

Organisational resource	Role and practice issues related to competence development	The individual
Staffing	Skill acquisition	Previous experience
Time	Practice difference and tensions	Evolving autonomy in practice
	Power balance and medical dominance	Perceived value of the study
	Support and mutual respect	
	Role definition (learner and mentor)	
	The scope of practice	

talked about a lack of peer support, and how staff shortages exacerbated this further. Everyone cited time management as a problem, and in all cases it was linked to staffing levels. Balancing the need to acquire and demonstrate clinical competency as well as meeting the academic requirements of the work was a challenge. This was connected closely to the notion of having protected study time, and although study time had been negotiated it ranged across the departments from half an hour a day, to half a day a week. Although study time was agreed prior to commencing the role and undertaking the module, taking the time was problematical:

> ''People do need to be willing to give up some of their own time…but managers need to understand the amount of commitment and time it takes to undertake this''

> ''Why should I do it in my own time, I was not doing it for pleasure…we were promised study time and I think that most of us did not get it?''

These experiences resonate with those identified in the literature where time management, self-discipline, collaboration difficulties, and the need to take responsibility for own learning whilst managing a high workload are cited as problematical.[7–11] Issues arose around cover for routine clinical work, doctors frequently offloaded work, and pressure was put on individuals when they tried to achieve a satisfactory work life balance. The notion of ''greedy institutions'' and ''time poverty'' has been shown to lead to feelings of disconnectedness; altered working relationships and may lead to isolation.[14] It is worth noting that Williamson et al's study [14] focussed on exploring neophyte practitioners' experiences and it maybe that perceptions and experiences change and evolve over the length of time in post.

The literature also suggests that when individuals perceive there is organisational support, and commitment, it has a positive impact on job satisfaction. Job satisfaction is raised throughout all the nursing and allied health professional literature as an important issue, and is inherently linked to experiences in practice. With higher vacancy rates for therapy radiographers than any other allied health professional; the successful implementation of extended roles is crucial to developing a thriving retention strategy for the profession. Job satisfaction and intention to leave the radiotherapy profession were issues explored in a grounded theory study by Probst and Griffiths.[15] This paper sought the views of all staff grades, and job design emerged as an important element related to job satisfaction, and was intrinsically linked to an individual's perception of their role. Organisational governance, and perceived organisational support and commitment, also impacts on job satisfaction and how committed the individual is to their work and the employer.[15] McSherry [16] explores the notion of ''working the role'', a concept linked to making roles effective in practice, and expressed how difficult this can be if there is no strategic overview from the organisation. Strategies have been suggested by other authors such as engaging key stakeholders, and ''sharing the vision'' which may help overcome this particular barrier.[9]

Role and practice issues related to competence development

This study found numerous issues related to how an individual acquired their skills, and which role and practice issues impacted significantly on their competence development. Competing with registrars for the oncologists time, in terms of mentoring and peer review, was problematical in some departments.

> ''one of the biggest difficulties I had was trying to get the consultants by themselves on a one to one, and to find the patients because obviously the registrars are looking at the same patients''

This was not an issue experienced by all students because in some departments registrars were not in the clinical structure and this conflict was never cited as an issue. In some instances limited clinical guidelines combined with conflicting and inconsistent practice by oncologists, made it difficult for the student to find out what practice was deemed acceptable.

> ''There are clinicians who will do things differently anyway, and its a problem you get with lung mostly''

Medical dominance is often cited in the nursing literature as a problem and this was also was also raised in a profession specific paper by White.[17] Whites work discusses the results from a questionnaire sent to multi professionals in one Hong Kong radiotherapy department which explored the potential for role extension with therapeutic radiographers. Although it identified medical dominance as a potential barrier to role development; it could be argued that cultural issues and practice differences between the United Kingdom and Hong Kong may limit the relevance of some of the findings. However, one

phenomenological study of review radiographers' experiences suggested that relationships with doctors remained hierarchical, and this was compounded by a lack of co-operation from treatment radiographers.[17]

Colyer's findings [18] of medical dominance were not corroborated in this study and all participants felt that mutual trust and respect did exist. However, the level of trust they reported varied and manifested itself in different ways. It ranged from total trust in what the therapeutic radiographers were doing (as in not checking their work in any great detail) to what was described, and perceived as ''nit picking'' over tiny issues. These next comments came from an individual where they reported differences between doctors in the same organisation.

> ''When I was just starting out they would walk in, barely look at the screen and say fine, and I was like hang on a minute, look again, are you happy?''

> ''The other extreme, and it was not just with me because I witnessed them doing this with the registrars', you prepare the field, and then the consultant changes it''

Offering clear definitions regarding the role of the learner and the mentors would seem to be beneficial. In some situations it seemed there was confusion between what the doctor thought they were being asked to offer in terms of mentorship, and what the student perceived to be their role. This naturally impacted on the nature and dynamics of the learning environment and the relationship between them.

> ''Some of them just could not get their head around what it was they (and I) were supposed to be doing''.....

> One of the doctors said,

> ''If I draw three quarters of the field for you, you can mark it up'' and I said, well no, that's not the idea, the idea is that I use the evidence from the notes to put the field on for you''

Is there confusion or disagreement amongst the doctors about what extended role practice for therapeutic radiographer entails? Is the medical profession divided between those doctors that actively support and promote role extension, and those who are opposed to it? It could be that there are some who are interested in the notion of role extension for therapeutic radiographers, but are unclear about how they could facilitate it. Undoubtedly the doctors need to have a clear picture of the intended nature and scope of current and future roles. As key stakeholders in role development, their initial involvement may alleviate problems later when they are asked to engage with, and facilitate the competence development of individual practitioners. The comment below came from one therapeutic radiographer and reflects their perceptions regarding doctors' attitudes towards the notion of extended role practice.

> ''I think a couple of the ones that are resistant, its more to do with change in general, and whether radiographers should be doing this, as opposed to this being personal''

For some individuals, once they were perceived to be performing well in the training role, the scope of practice could have expanded beyond what was initially envisaged, and this proved difficult to manage in terms of making sure they were on target to meet their learning outcomes.

> ''I could either have a very limited scope of practice or a free for all effectively''

On a positive note this was linked to how they felt there was mutual trust and respect, between professional groups, however it was noted that this was tinged with a degree of caution:

> ''I think on the whole that people trust me, they think I am capable, but they are very wary of how far I am allowed to go and how quickly''

Conversely, for some individuals, there was a degree of frustration associated with how the role could be developed, and instances were cited where there was a:

> ''Lack of comprehension of how the role can develop''

> ''Lack of vision''

All of the practice issues cited by the interviewees resonate with themes found in the literature. Ambiguity in defining the roles and unrealistic expectations of one person's level of work capacity often meant the scope of practice was felt to be too big and unmanageable by the post-holders.[7–11] The literature also indicates that conflicts between personal practice developments and the custom and practice of the service can compound any difficulties experienced by individuals.[7] Themes relating to isolation and lack of support continue to be an issue when individuals undertake ''pioneering roles'' [9] Interestingly, the notion of being a pioneer and the difficulties this can present is reaffirmed by Brown and Dray,[10] where they explored the experiences of pioneer nurse practitioners whose median length of time in these roles was 22 years. Brown and Dray's grounded theory study utilised focus groups and uncovered a central theme which revolved around developing and advancing practice autonomy. Six further sub themes were identified, one of which was breaking free, leaving the familiar behind and exploring unchartered territory. This may have a resonance with therapeutic radiographers entering into new roles and engaging with different working environments. They also identified ''encountering obstacles'', and describe ''meeting resistance, being undermined and made to feel invisible''. Elements of conflict and resistance to roles are also raised by Ball and Cox,[19,20] where they stress the importance of making the advanced practice roles credible, especially where there were ''turf and territory'' issues. This notion of having clearly demarked professional boundaries was highlighted as a potential issue in a survey of radiologists' perceptions of role development for diagnostic radiographers by Forsyth.[21]

Ball and Cox[19,20] reported conflict horizontally with other nurses, and Colyer[18] also found this with therapeutic radiographers. Autonomy, accountability and issues of power were raised by Fairley,[22] where the marginalisation of post-holders was often used as part of a power strategy

to diminish the power and influence of post holder. Fairley also suggests that this issue may have particular relevance to nursing, where nurses are not viewed as a powerful group. This interesting view of positional and professional power in therapeutic radiography remains unexplored, and may be worthy of further investigation.

The individual

The personal, professional and educational experiences an individual brings to the role naturally impacts on their perception of the learning experience. Working academically at Masters level was a concern for some individuals, and for many this was their first Master's module. They wanted clear guidance and support from the university regarding evidencing clinical competencies whilst demonstrating Master's level skills. In the clinical environment strategies that worked well included the use of problem based learning (often an approach utilised by oncologists), and supportive mentorship. Providing a coherent link between academic work and clinical practice seemed to be effectively facilitated through using case studies. This approach was well received by all students and deemed to be a valuable learning tool. There was a perception that undertaking the module validated, and gave credence to their individual practice, especially within the multidisciplinary team.

> ''The clinicians are not necessarily questioning the knowledge; its better on paper if I can demonstrate that I have this knowledge…it is proving to them that you understand''

Undertaking the module was highly valued by the individual when it was linked to a tangible and transparent career structure within their department.

> ''I know where I am aiming for in the long term with my career''

Conversely, where a career progression framework was not transparent to the individual this caused discontent. Some individuals commented on the negative effect Agenda for Change had on their motivation to undertake the modules.

> ''I am not going to get any recognition in the department for it, I am not going to go up a pay band, and I am not going to get any thanks from anyone, I think that's how a lot of people feel''

The literature does suggests that development of practice expertise is a liberating and empowering experience for an individual, and increased job satisfaction leads to improved recruitment and retention.[7,15] Personal characteristics identified as key enablers in the literature were confidence, adaptability, stamina, assertiveness and negotiating skills.[11] Emotional intelligence has also been identified as a social enabler; and explores the dimensions of an individual's personal and social competence. It is proposed that a clear understanding of how emotional intelligence works, and understanding how to modify behaviour feeds into a person's self awareness and self-management. This understanding can then enable individuals to effectively use those attributes to manage others.[23] Supporting the development of these skills could help with conflict resolution and enable roles to work effectively. By using good clinical supervision Colyer [18] suggests that skills and confidence can be built and the development of practice autonomy would be effectively enabled. This is important as a lack of confidence by the post holder is perceived to be a barrier [11] but good clinical supervision may help overcome this. This could be pivotal to acquiring the non-clinical skills that enable roles to be successfully implemented in practice.

Limitations of the study

This was a small exploratory study, and the credibility and trustworthiness of the data could have been enhanced by interviewing a greater number of individuals with different scopes of practice from a greater number of departments. This information may have allowed the researcher to explore any links between different roles and workplace issues. Exploring student experiences from other higher education institutes who offer this kind of training for role extension could also have enriched the data. However, it is anticipated the information gleaned from this exploratory study should be useful and inform future studies which will explore role extension.

Conclusions/recommendations

It is recognised that new educational models must emerge, and be evaluated, to offer appropriate support to those individuals who demonstrate the skills and ability to progress to advanced and consultant levels.[24] These models need to be grounded in practice, be reflective and responsive to the dynamic changes of the service environment, yet mindful of the legal and ethical issues associated with role development. Potentially learning focussed and based on the workplace can meet these requirements. However, for it to be successful, consideration of the following educational and organisational strategies maybe prudent.

Departments need to deliberate how they can effectively introduce and support individuals, with due consideration for appropriate staffing levels and skill mix. Study time need to be agreed in advance and wherever possible protected to ensure students' progress.

Increased numbers of trainees at higher practice levels can have a negative impact on the student learning experience and their progression. In larger teaching hospitals, individuals might be competing with registrars for ''cases'' in certain patient groups and oncologists may have conflicting demands placed on them for their mentorship and support. Extended roles such as breast mark up and palliative mark up seemed to be affected the most although this needs to be explored further.

The importance of good clinical supervision and mentorship cannot be underestimated and effective and timely systems need to be in place. Establishing effective models of support for mentorship and supervision at this level of practice should be encouraged, and collaboration between educational institutes and departments could facilitate this.

Careful recruitment of staff to these training roles is vital. How robust the person is in terms of ''emotional intelligence'' may impact on how successful the training is and perhaps how effective they are in the role.

Academic institutes need to work collaboratively with departments to develop tripartite agreements between the university, the departmental manager and the student. These should aim to clarify the role of the learner and the mentors and ensure that appropriate support mechanisms are in place. Learning should, as far as possible be tailored to meet the needs of the individual, the service and be congruent with the scope of practice.

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