

NET2021 Conference

Live session full abstracts

Theme Session 3C

Learning, teaching and assessment strategies

3Ci, 14:00 - 15:20, 1 September 2021

Research paper

Walking the cliff-edge: Managing the initial transition from student radiographer to professional radiographer

Julie de Witt, University of Derby

Promotional abstract: The movement from being a Healthcare student to a Healthcare professional in the UK has never been more pronounced than it is today. The marketisation of the higher education (HE) and health sectors requires that students make a very quick shift upon qualification from a 'consumer' identity to that of service provider, with a range of sharp corollary impacts upon their sense of accountability (Sloane & Miller, 2017). In these terms, how the earliest days of post-qualification employment are managed can have profound and long-lasting consequences. This presentation will discuss the findings of a UK-wide survey of graduates in which the two key findings around the importance of induction and preceptorship are discussed.

Background, including underpinning literature and, wherever possible, the international relevance of the research: The movement from being a healthcare student to a healthcare professional in the UK has never been more pronounced than it is today. The marketisation of the higher education (HE) and health sectors requires that students make a very quick shift upon qualification from a 'consumer' identity to that of service provider, with a range of sharp corollary impacts upon their sense of accountability (Sloane & Miller, 2017). In these terms, how the earliest days of post-qualification employment are managed can have profound and long-lasting consequences. In this paper, emergent of a broader qualitative study funded by the College of Radiographers Industrial Partnership Scheme, findings around the issue in diagnostic radiography are investigated.

Aim(s) and/or research question(s)/research hypothesis(es): These research findings are part of a larger project, the primary research question of which was "On a national basis, and from the perspective of recent diagnostic radiography graduates (with one to two full years of post-qualification experience), in what ways are current undergraduate curricula effective and/or ineffective in preparing individuals for the interlinked technical and personal demands of the modern healthcare sector?"

Research methodology/research design, any ethical issues, and methods of data collection and analysis: With institutional ethical approval, N=20 (f=13, m=7) junior diagnostic radiographers working across the UK were recruited for extended, semi-structured telephone interviews. Verbatim transcripts were analysed using Straussian Grounded Theory (Waring *et al.*, 2018).

Key findings and recommendations: Two key issues were raised by all participants: (1) Induction, and; (2) Preceptorship. Perhaps predictably, positive experiences of either/both were reported to have smoothed the pathway into practice, while actively negative experiences were reported to have stymied that transition. However, an overall absence of

either was received more variably. While some participants felt undermined, others claimed that it had boosted their resilience and made them more ready for the challenges ahead. Perhaps we can find parallels here in personal tutoring support in HE, as Yale (2019) notes it appears that if you can't do well, then don't do it at all?

Three key points to indicate how your work contributes to knowledge development within the selected theme:

- Understanding the different experiences of new graduates and the impact on their resilience, and how we address that in the educational setting prior to graduation (how we foster a sense of self-determination for example).
- For work on transition to the graduate workplace to be begun in the education setting, before graduation, in order to prepare students for this move from consumer to service provider.
- To consider how we, as education providers, work with clinical colleagues to build capacity in terms of preceptorship and mentoring newly qualified staff.

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Waring, L., Miller, P.K., Sloane, C. & Bolton, G.C. (2018) 'Charting the practical dimensions of understaffing from a managerial perspective: the everyday shape of the UK's sonographer shortage.' *Ultrasound*, 26(4), 206-213.

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Keywords: Induction, Preceptorship, Graduate Preparedness, Transition.

3Cii, 14:00 - 15:20, 1 September 2021

Research paper

Crowdsourcing: A novel tool to elicit the student voice in the curriculum design process for an undergraduate Radiography degree programme

Janice St. John-Matthews, University of the West of England

Promotional abstract: Student participation in curriculum design is an important and evolving aspect of higher education, but current methods to achieve co-creation can be undermined by practical and conceptual issues. We evaluated the use of a novel tool for curriculum design; anonymous crowdsourcing, open to all students enrolled on an undergraduate Radiography programme in the UK. The crowdsourcing generated many ideas for the revision of the curriculum and was well received by participants. Greater marketing of the crowdsourcing could further increase uptake. Crowdsourcing appears to be a valid model for supporting student voice in curriculum design. This study from a single programme offers lessons for others wishing to adopt and develop the approach elsewhere.

Background, including underpinning literature and, wherever possible, the international relevance of the research: Student participation in curriculum design is an important and evolving aspect of higher education, but current methods to achieve co-creation can be undermined by practical and conceptual issues (Healy & Healy, 2019). A tool that could be adopted to address these structural challenges is crowdsourcing. A narrative literature review highlighted a gap in the current evidence base pertaining to the role of crowdsourcing in curriculum design process (St. John-Matthews *et al.* 2019)

Aim(s) and/or research question(s)/research hypothesis(es): We evaluated the use of a novel tool for curriculum design; anonymous crowdsourcing, open to all students enrolled on an undergraduate diagnostic radiography programme in the UK.

Research methodology/research design, any ethical issues, and methods of data collection and analysis: A pragmatic action research approach was adopted (Lewin, 1948). Ethical approval was granted from the institute whereby the student is a Doctoral Candidate and the institute where the study was undertaken. Data was analysed inductively using the 15-point checklist described by Braun and Clarke (2006). We also evaluated the student experience of using the tool via a questionnaire.

Key findings and recommendations: The crowdsourcing generated many ideas for the revision of the curriculum and was well received by participants. Greater marketing of the crowdsourcing could further increase uptake. Crowdsourcing appears to be a valid model for supporting student voice in curriculum design. This study from a single programme offers lessons for others wishing to adopt and develop the approach elsewhere.

Three key points to indicate how your work contributes to knowledge development within the selected theme:

1. Crowdsourcing is a useful adjunct to on-site participatory curriculum design processes.
2. Crowdsourcing offers an anonymous, democratic voice to stakeholders; ideas can be generated, developed and voted on by the crowd.
3. The research adds empirical data to the under-reported area of student voice in healthcare curriculum design process.

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Healey, M. & Healey, R.L. (2019) *Students as Partners Guide: Student Engagement Through Partnership. A guide to the Advance HE Framework*. York: HEA. Available at: <https://www.advance-he.ac.uk/knowledge-hub/students-partners-guide-student-engagement-through-partnership> [Accessed 27 December 2019]

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Keywords: Curriculum, Crowdsourcing, Co-creation, Student Partners, Radiography.

3Ciii, 14:00 - 15:20, 1 September 2021

Research paper

Technology enhanced learning and teaching in Echocardiography: A systematic review

Edgar Susiku, Lusaka Apex Medical University, Zambia and Aléchia van Wyk, Middlesex University

Promotional abstract: This study used a systematic review methodology to explore evidence on the effectiveness of technology-enhanced teaching in Echocardiography training. The study found that technology-enhanced training in cardiac ultrasound offers comparable effectiveness in outcomes to traditional face-to-face teaching. Furthermore,

information gleaned on cost-effectiveness was indicative of the fact that technology-enhanced education can positively affect resource-limited settings and save costs in the long run.

Background, including underpinning literature and, wherever possible, the international relevance of the research: Recent epidemiological statistics show that cardiovascular disorders account for 35.5% of global mortality. The highest prevalence is reported in resource-limited settings. Given this situation, it is surprising that educational trends for echocardiographers in Sub-Saharan Africa nations do not mirror urgency concerning the training of this specific skillset

Aim(s) and/or research question(s)/research hypothesis(es):

1. Critically examine instructional models and frameworks relevant to the achievement of requisite exit-level cardiac ultrasound training outcomes.
2. Synthesise available evidence on the outcomes of technology-enhanced education in Echocardiography training.
3. Synthesise evidence on the cost of eLearning interventions aimed at resource-limited settings.
4. Formulate recommendations on sustainable, cost-effective and efficient eLearning strategies in Echocardiography Education for resource-limited settings

Research methodology/research design, any ethical issues, and methods of data collection and analysis: The conduct of this systematic review followed the standardised guidelines by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Moher *et al.*, 2009). We included randomised controlled trials (RCTs) and quasi-experimental studies that examined technology-enhanced teaching methods in cardiac ultrasound training compared with traditional educational interventions among undergraduate and postgraduate multi-medical subspecialty trainees.

Key findings and recommendations: Following a systematic review and meta-analysis conducted on eight identified studies, the findings showed that technology-enhanced training in cardiac ultrasound is of comparable effectiveness to traditional face-to-face teaching. Furthermore, information gleaned on cost-effectiveness was indicative of the fact that technology-enhanced education can positively affect resource-limited settings and save costs, though not outright. Therefore, this study proposes a rigorous effort to tap into the potentials of technology-enhanced teaching in Echocardiography and augment its effectiveness as an educational tool to increase the number and quality of cardiac ultrasound programs in resource-limited settings. Educational policymakers must therefore choose and implement technology-enhanced educational interventions taking into consideration country-specific contexts.

Three key points to indicate how your work contributes to knowledge development within the selected theme:

1. Technology-enhanced learning and teaching can help alleviate critical workforce needs in healthcare in resource-limited settings.
2. Educators resident at one end of the world can have many students in various geographic locations. Therefore, this could obviate the shortage of highly skilled educators in resource-limited settings.
3. The study suggests that institutions in high-income countries have an opportunity to discover new markets in the knowledge economy at reduced costs.

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Keywords: Echocardiography, eLearning, Technology, Enhanced Learning, Resource-limited.

3Civ, 1 September 2021, 14:00 - 15:20

Poster+

Maslow's Hierarchy of Needs-based content analysis of student definitions of what makes a 'good' and 'not so good' mentor in clinical radiographic practice

Julie de Witt, University of Derby

Promotional abstract: Final year (Level 6) Diagnostic Radiography students are taught the principles of mentoring and supporting learners in practice during an academic module. As part of this teaching they also explore their experiences/understanding in order to reflect on the theory of mentoring and supporting others, in order to then develop an understanding of their own development needs in relation to mentoring. Using a thematic analysis approach to the student definitions of a 'good' and a 'not so good' practice mentor, Maslow's Hierarchy of Needs was used as the analysis framework to determine the classification of the common themes that emerged. Analysis shows useful traits to 'foster' in the 'good' mentor definitions and ones to avoid as leading to deficit or diminution in the 'not so good' model.

Main focus/theme of, or issues addressed by, the poster: Mentoring and supporting learners in practice is an important aspect of any healthcare education programme, and yet remains variable in quality. One approach is to train undergraduate students with the key skills and to raise awareness of how to support learners effectively. Scaffolding skills, values and behaviours of a mentor in line with Maslow's hierarchy of needs, from the perspective of those still in training, is a novel approach to raising awareness of those qualities.

Research approaches and underlying evaluation: Students worked in small groups and produced artefacts in which they articulated the characteristics of a 'good' and then a 'not so good' mentor. When broken down there were then 88 words/short phrases relating to a 'not so good' mentor and 100 word/short phrases related to a 'good' mentor. Using a thematic analysis approach to the student definitions, Maslow's hierarchy of needs was used as the analysis framework to determine the classification of the common themes.

Implications for healthcare education: Outcomes align to Maslow's hierarchy of needs, although definitions in the 'safety needs' and 'love and belonging' needs are more common in the 'not so good mentor' category, underlining that these basic needs are essential and noted when they are undermining good support. Comments from the students such as 'bullying', 'undermining the learner', 'not knowing their name' for example can be used as discussion points when developing mentors in practice. Equally, aspects from 'good' mentoring which build 'self-esteem' need and 'cognitive' needs such as 'challenges you to think for yourself' and 'creates a reflective environment' can be discussed. Thus, encouraging reflective practice in our learners both undergraduate and in practice.

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Keywords: Mentoring, Maslow, Practice Education.