369 Examining the Impact of Online Teaching and Learning on Medical Trainers and Trainees in the East of England Deanery

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Research Domains

Technical, Professional and Vocational Higher Education (TPV)

Abstract

The unprecedented changes to the delivery of medical training in response to the Covid-19 pandemic continue to impact postgraduate medical education. Our study aims to learn from this unanticipated 'experiment' and inform the development of future policy and practice. While the focus is on medicine, findings will offer insights across HE. To understand new forms of provision and educator and learner experiences, we conducted a theory-based evaluation to examine the factors that could affect online teaching and learning within the East of England Deanery. Our results indicate that trainees and trainers enjoyed the flexibility offered by online learning and believe that online training should play a more prominent role in medical education. The perceived learning efficacy was predicted by the lecturers' experience in online teaching, course features, and self-regulation. The challenges included reduced trainers' motivation to teach online, lack of admin support and IT skills, and loneliness during learning.

Full paper

Introduction

The continuous digital transformation in higher education calls for developing and providing successful blended teaching methods utilising digital technology (Redecker & Punie, 2017; Lohr et al. 2021). However, the medical field was slower in adopting this transition, until it became a necessity due to the onset of the COVID-19 pandemic.

Findings from previous studies indicate that students' performance and satisfaction in online learning environments are predicted by learner characteristics, such as self-regulation, and the design features of the online learning environment, including the quality of the platform and technology-supported interactions (Kintu et al., 2017; Wu et al., 2012).

From students' perspectives, the benefits of online learning include greater flexibility and higher attendance (ElShami et al., 2021; Stoehr et al., 2021). According to Stoehr's et al. (2021) study of 3286 medical students studying online due to COVID-19, most students were satisfied with the quality (62%) and quantity (67%) of the courses and called for maintaining a higher proportion of online provision beyond the pandemic. Following these findings, Stoehr and colleagues called for utilising the Covid-19 pandemic as the 'long-awaited catalyst' for increasing the proportion of online teaching in medical education.

The systematic barriers to effective online teaching provision in medical contexts include lack of planning and resources, usability issues, time constraints, poor technical skills, inadequate infrastructure, and absence of institutional strategies and support (Bastos et al., 2022; O'Doherty et al.,2018). In addition, Stojan's et al. (2022) systematic review identified the absence of non-verbal cues and low social interaction as threats to engaged learning.

Research questions

Our study sought to (1) explore trainer and trainee perspectives on the newly introduced blended learning platform (BLP) and (2) identify the enablers and barriers that affect teaching and learning on the BLP in the East of England deanery.

Methodology and Evaluation Design

Our evaluation was developed using a theory-based evaluation (TBE) design (Stern, 2015). The evaluation took place using an exploratory sequential design (focus groups and surveys) with the qualitative data from the focus groups informing the survey design. A total of 546 trainees and 49 trainers responded to the surveys. The focus groups were attended by 15 trainers and 13 trainees.

Results

Our results indicate that the trainers perceived the flexibility provided by online training as a great asset. The administrative challenges and IT skills requirements, however, reduced its desirability among trainers, according to 54% of the respondents. Additionally, 70% felt unmotivated to teach online. Furthermore, 85% of the trainers disagreed that online teaching makes them more connected with their learners compared to face-to-face teaching, a challenge that is aligned with prior research (Bastos et al., 2022; O'Doherty et al., 2018). Finally, the trainers admitted that it is challenging to formatively assess trainees during blended delivery, as trainers have limited knowledge regarding effective approaches for accomplishing this.

Most of the trainees (81%) valued the flexibility and accessibility of online teaching, especially those who work in remote hospitals or have caring responsibilities. However, such flexibility did not improve their perceived effectiveness of learning, according to regression analysis. Instead, self-regulation (ability to set short-term goals in remote learning) and course features (clear course descriptions and frequently updated materials) predicted their perceived learning efficacy. Additionally, the trainers' experience in online teaching was a statistically significant predictor of trainees' perceived learning efficacy. Interestingly, the trainers' experience also predicted the trainees' ease to motivate themselves to study online, which in turn predicted their overall satisfaction. Furthermore, interaction with the trainer predicted lower perceived time demand.

The most significant predictors of trainees' preference for future online provision are (1) the flexibility offered by online learning, (2) the lecturers' experience in delivering online teaching, and (3) their perception of their learning efficacy. Notably, features of the online platform did not predict their responses.

Conclusion

The current study highlighted that the perceived efficacy of learning is predicted by content features of the learning environment, learner characteristics, such as self-regulation, and the lecturers' experience in online teaching. The study also highlights the important role of the lecturer where their experience predicts students' motivation to learn remotely and their interaction with students reduces the perceived time demand. Trainers' motivation appears to play a key role in their perceived teaching efficacy; their interest may be enhanced by learning interactive techniques, addressing IT skills gaps, and clarifying trainees' needs and trainers' expectations. Finally, online learning platforms require continuous improvement and updates to be effective.

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