E-learning as Part of Residency Education

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Abstract. Through a literature review in combination with qualitative analysis of course evaluations, this study examines aspects that contribute to enhancing e-learning for physicians in a residency education program. The literature review and the qualitative analysis outline three main factors (pedagogical, technological, and organizational), highlighting the importance of a holistic approach that includes learning and technology in context when integrating e-learning strategies in adult learning programs. The findings contribute insights and practical guidance for education organizers on how to conduct e-learning during and after the pandemic.

Keywords. Covid-19, continuing professional development (CPD), residency education, digitalization, e-learning, healthcare, physicians.

1. Introduction

Like many education institutes, organizers of medical residency education had to switch to e-learning during the COVID-19 pandemic. In healthcare e-learning, individual digital skills and understanding of the usefulness of digitalization in practice, along with pedagogical factors, self-motivation and interactive learning methods can be facilitating factors [1,2]. This study contributes to enhancing e-learning for resident physicians in Sweden through the following research question: how do resident physicians perceive and relate to e-learning, and what aspects should be considered when integrating e-learning as part of adult learning? The paper adopts a sociotechnical approach to e-learning, stressing the importance of social situations and interactions, and technology aspects to foster an environment that creates engagement and motivation [3,4].

2. Methodology

The study was performed by conducting a literature review [5] combined with qualitative analysis on course evaluations, to investigate physicians’ experiences, perceptions, and satisfaction with e-learning. Four online courses with resident physicians (79 individuals, 119 participants in total) in a Swedish hospital during 2020-2021 formed the base for the analysis. The questionnaires contained open-ended reflective questions about participants’ experiences and were analyzed through thematic analysis [6].

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3. Results

The main factors influential for e-learning identified in the literature review can be summarized as pedagogical (e.g., learner-instructor interaction), organizational (e.g., infrastructure, training) and technological (e.g., hardware and software). The qualitative analysis correspondingly revealed three main themes related to the physicians’ perceptions, experiences and satisfaction with e-learning: i) views and ideas related to the technology used during their participation in the online courses. This could be about internet connection or sound and video using Zoom. ii) pedagogy-related issues, which could be about the lectures, group discussions and social interactions; and iii) course management issues, such as planning and disseminating of course materials.

4. Discussion and Conclusion

The participants in the study valued the enabling pedagogical factors of e-learning, such as facilitated discussions in break-out rooms and walk-and-talk groups. This is in line with the literature, where interactive functionalities were considered among the most important features [4,7]. Technology factors, such as reliable tools and connection, are among the characteristics that affect the usability and the effectiveness of e-learning [8]. Participants in this study were likewise unsatisfied when faced with technology-related issues such as poor audio quality and the absence of webcams by some of their colleagues. Organization factors related to management of course planning and activities, were also mentioned, such as access to course material, and communication during lectures [7]. In sum, similarities in the literature review and the qualitative analysis confirm that all factors should be considered, highlighting the importance of a socio-technical approach that includes learning and technology in context [3,4]. Altogether, the findings suggest that important lessons are to be learned, but in doing so, there is great potential for integrating e-learning strategies into post-pandemic residency education.

References