Chapter 6
Seamless Learning Design Criteria in the Context of Open and Distance Learning

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ABSTRACT

Seamless learning is a form of learning whereby, regardless of location, the learning process, as it relates to learning needs and readiness, can continue through the aid of technology. Seamless learning environments are spaces that can be accessed independent of time and place through mobile or stationary devices, and that are equipped with technologies capable of meeting learning needs. With the advancements in technology, seamless learning environments are becoming increasingly popular. In this regard, the design of environments that are suitable for seamless learning in open and distance learning (ODL) fields is of critical importance. This study aimed to determine the criteria for the design of seamless learning environments in the context of ODL. In line with this aim, the Delphi technique, a qualitative research approach, was used. A total of 47 criteria under 10 different themes were identified in the study.

INTRODUCTION

Sharoles et al. (2012) defined seamless learning as the unrestricted continuity of technology-based learning regardless of place, time, and social environments. Seamless learning is identified as a special form of mobile and accessible learning that has been and continues to be improved through technology. In looking at the definitions of technology-based learning approaches presented in the literature, ubiquitous learning is defined as the availability of learning resources at any time and in any place, whereas seamless learning is defined as a form of learning that also enables, in addition to what is provided through ubiquitous learning, a shift to different learning habits and scenarios. According to an alternative definition offered by Wong et al. (2012), seamless learning is a learning approach that has the potential to include learning models which encompass many fields of learners' daily lives and which are supported by various technologies, from virtual classrooms to e-learning.

With the advancements in mobile technologies, seamless learning environments have become more widespread. In order to design these environments to meet learners' and teachers' needs in the learning process, appropriate design criteria are required. Keeping this in mind, the purpose of the present research is to identify seamless learning environment criteria for open and distance learning (ODL). The following research question was developed to guide the research: What are the themes and criteria for evaluating seamless learning environments?

BACKGROUND AND RELATED LITERATURE

Seow et al. (2008), in their study, highlighted that researchers are interested in seamless learning environments that are capable of combining informal and formal learning once mobile devices and network access become more widespread. Based on studies related to the design of a learning environment using mobile devices and online portals for environmental education and inquiry-based science learning, the following components of seamless learning environments were identified: community, place, time and context, and cognitive devices and constructs. Using these components, they proposed a framework based on the theory of distributed cognition for seamless learning.

Kukulska-Hulme and Viberg (2018), in their study, presented a review of the literature published between 2012–2016 which focused on mobile collaborative language learning in order to identify the mobile technologies used to support collaborative learning between second- and foreign- language students. Their results highlighted the elements of flexible use, feedback on-time, customization, socialization, personal assessment, active participation, peer coaching, outdoors sources of inspiration, and cultural originality.

Sharples (2015), who investigated seamless learning in terms of its capacity to deliver a continuous meaning flow despite the changes in the physical and social context, reported that one of the ways to achieve this was to provide a flow state whereby learners lose their awareness about their environment. It was further stated that mobile educational games can serve as one of the means to reach such as flow; however, it was noted this was neither easy nor necessarily effective on learning. Another approach

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