Chapter 18
Evaluation Methods for E-Learning Applications in Terms of User Satisfaction and Interface Usability

Nouzha Harrati
University of Souk Ahras, Algeria

Zohra Mahfouf
University of Souk Ahras, Algeria

Imed Bouchrika
University of Souk Ahras, Algeria

Ammar Ladjailia
University of Souk Ahras, Algeria

ABSTRACT

The use of online technology has become ubiquitous and integral part of our daily life from education to entertainment. Because of the ubiquity of e-learning and vital influence for engineering the educational process, it is no surprise that many research studies are conducted to explore different aspects covering the use of e-learning in higher education. The assessment and evaluation aspects are considered arguably the most influential part for measuring the success and effectiveness of e-learning experience. As more and more universities worldwide have opted to use online technology for their course delivery, research in e-learning systems have attracted considerable interest in order to apprehend how effective and usable e-learning systems in terms of principles related to human computer interaction.

INTRODUCTION

In a modern society, the use of online technology has become ubiquitous and integral part of our daily life from education to entertainment. This is mainly due to the proliferation of the use of computers and smart devices combined with the availability and affordance of internet connectivity in most places. In fact, digital networks and modern communication have greatly transformed and reshaped the way we live and work in such a contemporary era yielding a tremendous effect on the necessity and opportunity to learn (Garrison, 2011). Although, there are advocates in the academic community who prefer traditional teaching methods which include face-to-face communication, considerable efforts are being devoted

to promoting e-learning and the use of new technology for course delivery and teaching. The learning paradigm is shifting from lecturer-centered to student-centered as it can be undertaken anywhere, from classrooms to homes. In fact, several scholars described the growth rate of e-learning as unprecedented and explosive as the adoption of e-learning went beyond academic institutions to be considered seriously in corporate companies and public administrations as part of their employee training programs. Because of the ubiquity of e-learning and vital influence for engineering the educational process, it is no surprise that many research studies are conducted to explore different aspects covering the use of e-learning in higher education. This includes for instance the learning models, software interactivity and human behaviors. The assessment and evaluation aspects are considered arguably the most influential part for measuring the success and effectiveness of e-learning experience (Anderson, 2008). Evaluation for e-learning goes beyond assessing the learner performance. The evaluation of the delivery procedure for e-learning is as critically important to understand and harvest a meaningful and fruitful learning experience (Granić, 2008; Harrati, Bouchrika, Tari, & Ladjailia, 2016). In fact, considerable criticism regarding the quality of existing e-learning systems are being cited by a number of studies (Chua & Dyson, 2004) in addition to further issues including low performance, poor usability and customizability. Furthermore, online education has been further criticized as not supporting a student-centred learning but replicating the traditional face-to-face teaching paradigm.

For the definition of e-learning, although the term can be simply explained as an educational software system that allows a user to learn anywhere and at any time, an agreed definition for e-learning is still elusive among scholars (Moore, Dickson-Deane, & Galyen, 2011). The term of e-learning starts with the letter e which stands conventionally for electronic in the same way as e-mail. The term "online learning" is occasionally used to refer synonymously to e-learning in which case the learning process takes place away from formal classrooms and facilitated by the use of internet-based technologies. The terms e-learning and online learning can vaguely overlap with other terms such as distance learning which is often associated with older technologies (Moore et al., 2011; Pachler & Daly, 2011). Horton (2011) defined e-learning as the practice of using information and communication technology (ICT) to simulate a learning experience that can be created, organized and managed with enough freedom decoupled from any temporal or geographical boundaries. Triacca et al. (Triacca, Bolchini, Botturi, & Inversini, 2004) argued that certain level of interactivity needs to be included to render the definition applicable for describing the learning experience. Pachler and Daly believes that the primary aspect in the debate for the elusive definition of the term seems to be around which specific pedagogical model needs to be designed and integrated within the use of digital and online technology. Pachler et al. further stressed that e-learning is no longer about the distance or remote learning, but forms part of a modern paradigm and conscious choice in education for the best and most appropriate ways of promoting effective teaching. The Joint Information Systems Committee (JICS) which is an influential organization within the United Kingdom supporting higher education institutions in the implementation and adoption of new technologies, referred to e-learning as "enhanced learning" with the definition of "learning facilitated and supported through the use of information and communications technology". Blended Learning is another term which is frequently used and it tends to point to the teaching process where computer-based learning are integrated in tandem with face-to-face classical teaching activities (Garrison & Kanuka, 2004). This is known as a hybrid form of e-learning in which online technologies are employed to enhance or supplement traditional teaching (Garrison, 2011). Flipped classroom is a pedagogical form of blended learning where typical lecture and homework of a course are reversed. Lectures are viewed

20 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/evaluation-methods-for-e-learning-applications-in-terms-of-user-satisfaction-and-interface-usability/174581

Related Content

Anti-plagiarism Software in an Irish University: Three Years Later
Angelica Risquez (2010). *Critical Design and Effective Tools for E-Learning in Higher Education: Theory into Practice (pp. 127-140).*
www.irma-international.org/chapter/anti-plagiarism-software-irish-university/44464

A Reflection on Teachers' Experience as E-Learners
Tony Cunningham, Claire McDonnell, Barry McIntyreand Theresa McKenna (2009). *Applied E-Learning and E-Teaching in Higher Education (pp. 56-84).*
www.irma-international.org/chapter/reflection-teachers-experience-learners/5156

Using the WebQuest Approach to Elicit Student Engagement in a University Course: A Case Study
Stephen Asunka (2016). *Handbook of Research on Engaging Digital Natives in Higher Education Settings (pp. 304-326).*
www.irma-international.org/chapter/using-the-webquest-approach-to-elicit-student-engagement-in-a-university-course/148543

Managing Assessment Resources in the Open ICOPER Content Space
Israel Gutiérrez Rojas, Raquel M. Crespo, Michael Totschnig, Derick Leonyand Carlos Delgado Kloos (2012). *Collaborative Learning 2.0: Open Educational Resources (pp. 183-200).*
www.irma-international.org/chapter/managing-assessment-resources-open-icoper/64406

Automated Scoring in Assessment Systems
Michael B. Bunch, David Vaughnand Shayne Miel (2016). *Handbook of Research on Technology Tools for Real-World Skill Development (pp. 611-626).*
www.irma-international.org/chapter/automated-scoring-in-assessment-systems/139703