

Chapter 14

Challenges Encountered in Creating Personalised Learning Activities to Suit Students Learning Preferences

Eileen O'Donnell
Trinity College Dublin, Ireland

Vincent Wade
Trinity College Dublin, Ireland

Mary Sharp
Trinity College Dublin, Ireland

Liam O'Donnell
Dublin Institute of Technology, Ireland

ABSTRACT

This book chapter reviews some of the challenges encountered by educators in creating personalised e-learning activities to suit students learning preferences. Technology-enhanced learning (TEL) alternatively known as e-learning has not yet reached its full potential in higher education. There are still many potential uses as yet undiscovered and other discovered uses which are not yet realisable by many educators. TEL is still predominantly used for e-dissemination and e-administration. This chapter reviews the potential use of TEL to provide personalised learning activities to suit individual students learning preferences. In particular the challenges encountered by educators when trying to implement personalised learning activities based on individual students learning preferences.

INTRODUCTION

The challenges encountered by educators who have attempted to create personalised e-learning activities to suit individual students learning preferences are many and varied. This chapter reviews some of the issues encountered when attempting to personalise e-learning activities based on students

learning preferences. Educational hypermedia systems are computer based systems which enable learners access to a range of learning activities including: audio, video, graphical and text files. The use of adaptive educational hypermedia systems enables the creation of personalised e-learning activities as an alternative teaching methodology to the traditional teaching approach of “one size fits all” (Brusilovsky, 2003, p. 377). The objective of adaptive educational hypermedia systems is to

DOI: 10.4018/978-1-4666-3930-0.ch014

tailor web content to suit learners' prior knowledge, perceived needs, and interests based on their previous engagement with the system. The one size fits all (Bajraktarevic, Hall, & Fullick, 2003; Chen, 2009; Hwang, Chu, Shih, Huang, & Tsai, 2010) approach to higher education is possibly not the best teaching methodology to apply, but it is the easiest to achieve. "For almost three decades the concept of adaptation of computer education has been an important topic" (Burgos, Tattersall, & Koper, 2006, p. 54) still the use of personalised e-learning is not realisable by non-technical educators. Non-technical authors who do not have the technical expertise to use sophisticated authoring tools, require lightweight authoring tools to create effective e-learning activities (Chiu & Yu, 2002). "Adaptation is a quite complex process taking into account several stakeholders and inputs: User, teacher and set of rules" (Burgos, Tattersall, & Koper, 2007, p. 168). The complexity involved in authoring adaptive personalisation has prevented it from being used by many educators. Bennet and Bennet (2008) suggest that learning is a very private occurrence which is dependent on various individual traits of each learner. The use of adaptive educational hypermedia systems would enable educators to match online educational activities to the various individual traits of each learner; but not all educators have sufficient technical competence to achieve this aim.

The vast majority of university students belong to the 'net generation' who regularly engage with gaming technologies which provide instant feedback on scores achieved and enable online interactive gaming with other gamers from all over the globe. Learners from the 'net generation' expect more from e-learning than e-dissemination and e-administration (Littlejohn, 2009) they expect an online collaborative supportive environment (McGinnis, Bustard, Black, & Charles, 2008). The dominant use of e-learning platforms is for the transferral of information with the expectation that learners would passively absorb the expected learning outcomes and teachers would continue to pass on information regardless of students learn-

ing preferences (Capauno, Miranda, & Ritrovato, 2009). The use of e-learning systems to transfer knowledge for learners to passively absorb cannot compete with the interactive learning experience achieved by engaging with gaming environments. Personalised learning activities would provide learners with a more interactive learning experience. "The growing complexity and constant change of knowledge require a new approach to learning" (Chatti, Jarke, & Specht, 2010, p. 84).

"Being at home is not just a nice feeling; it tells us when we are in a place that 'gathers' our world together" (Kolb, 2000, p. 124). Personalised e-learning may possibly afford the learner the opportunity to feel that all the learning activities necessary for the required knowledge acquisition are held together in the same place, i.e. their learning portal. Learners work and feel at their best when they are in a comfort zone "places – including virtual places – are loci of 'our' actions and expectations and norms" (Kolb, 2000, p. 126).

Many educators consider that the syllabi defines the required learning outcomes, and plan the course content accordingly, without necessarily taking into consideration the personal learning requirements of each individual learner. Bajraktarevic, Hall and Fullick (2003) in a paper discussing a hypermedia system which facilitates both global and sequential learning styles concluded "the findings suggest that students benefit from the learning material being adapted to suit their learning preferences" (Bajraktarevic et al., 2003, p. 51).

Mulryan-Kyne (2010) discusses the challenges encountered when teaching to large classes and suggests that more active classroom activities may improve the quality of learning. The personalisation of e-learning activities to student individual students learning preferences may be a relevant solution to dealing with large classes.

This chapter outlines some of the challenges encountered by educators who try to personalise learning activities to suit the learning needs of individual students based on their learning preferences. Issues, controversies and problems

23 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/challenges-encountered-creating-personalised-learning/76194

Related Content

Realizing Diversity: COVID's Impact on Inclusive Classroom Learning

John Essington (2022). *Handbook of Research on Learner-Centered Approaches to Teaching in an Age of Transformational Change* (pp. 42-62).

www.irma-international.org/chapter/realizing-diversity/304694

"Stay Out of the Way! My Kid is Video Blogging Through a Phone!": A Lesson Learned from Math Tutoring Social Media for Children in Underserved Communities

Paul Kim (2011). *International Journal of Online Pedagogy and Course Design* (pp. 50-63).

www.irma-international.org/article/stay-out-way-kid-video/51379

KABISA: Evaluation of an Open Learning Environment

Geraldine Clarebout, Jan Elen, Joost Lowyck, Jef Van de Endeand Erwin Van de Ende (2004). *Instructional Design in the Real World: A View from the Trenches* (pp. 119-135).

www.irma-international.org/chapter/kabisa-evaluation-open-learning-environment/23938

The Customized xLearning Environment Model: Meeting the Needs and Expectations of Students

Anabela Mesquita, Fernando Moreiraand Paula Peres (2017). *International Journal of Online Pedagogy and Course Design* (pp. 39-52).

www.irma-international.org/article/the-customized-xlearning-environment-model/187236

Assistive Technology for Individuals with Disabilities

Yukiko Inoue (2008). *Encyclopedia of Information Technology Curriculum Integration* (pp. 56-62).

www.irma-international.org/chapter/assistive-technology-individuals-disabilities/16680