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Maria A. Rodriguez-Yborra Dr.
University of Bolton, mar2@bolton.ac.uk

Maria Toro
Lulea University of Technology, Sweden

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Sharing e-learning resources in Ergonomics

Maria Toro-Troconis, Dr. Maria Rodríguez-Yborra

Lulea University of Technology, Lulea, Sweden

Tel. + 44 709 2110 889 Fax. + 44 709 2110 889

www.e-ergonomics.inuk.com

mtooro@ergowebdesigns.co.uk

Bolton Institute of Higher Education, Education Subject Group,

Chadwick Street BL2 1JW, Bolton, UK

Tel. + 44 (0) 1204 903356 Fax. + 44 (0) 1204 399074

mar2@bolton.ac.uk

Abstract

This short paper introduces the concept of e-learning and definitions required for the production of e-learning resources, such as: digital asset, content object and learning object. In the field of Ergonomics, the sharing of academic resources online has become an important collaborative exercise, although some key concepts need to be clear to explore the most efficient ones. This paper makes emphasis to the fact that standard ways of describing and developing educational materials are needed so that they can be easily searched for and located, so academic staff in the field of ergonomics, which itself embraces the right 'human-computer' interaction, can enhance their teaching and learning experience.

E-learning has been added to a range of terms commonly used to describe the way we use technology to support teaching and learning. One of the simplest definitions of e-learning has been proposed by the Learning and Skills Council (LSC) in its Funding Guidance for Further Education in 2003/04 document:

E-learning is learning that involves a substantial amount of ICT technology, such as using computers and the Internet.

It is convenient to split e-learning into two components – blended learning and online learning (NLN, 2003).

Online learning applies to the situation where an entire course or programme is delivered across a learning platform, such as a VLE, without any face-to-face component.

Blended learning involves the use of technology to enhance traditional face-to-face learning. At one end of the spectrum, it may simply involve using PowerPoint in the classroom. At the other, it may involve using a VLE to support the face-to-face component of a course.

Defining the components of online learning materials

The following definitions provide examples of the various components of learning materials. The definitions are by no means definitive as work towards classification is still in progress (Ferl, 2003).

Learning content can be categories into three main types: Digital Asset, a Content Object and a Learning Object.

Digital Asset

A digital asset is the raw ingredient from which a more sophisticated resource can be made. The digital asset could be used in a variety of contexts. Examples of digital assets could include images, a piece of text, a video clip, an audio clip, a formula, a graph, a chart, etc. At this level the resource has infinite uses and can be re-purposed and used in many different ways to achieve various different outcomes. An example of a digital asset in the context of Ergonomics will be provided in the technical paper.

Content Object

A content object is a digital asset within a particular context. It may have been contextualised by combination with other digital assets or by the addition of new information.

At this level the resource has fewer uses, but could be re-purposed within the context to achieve several different outcomes. An example of a content object in the context of Ergonomics will be provided in the technical paper.

Learning Object

A learning object has learning objectives (implicit or explicit).

It has been contextualised within a focused activity based on either a raw digital asset or a content object.

At this level the resource has one unique purpose. While it can be used many times, it has a specific learning objective. At this level the learning object is integrated into a lesson or course. It may be combined with other learning objects or with traditional class-based or practical activities. An example of a learning object in the context of Ergonomics will be provided in the technical paper.

Education is being transformed continuously by the different and varied uses of technology to support student learning and knowledge delivery. This impact is well felt across the educational sectors and at the same time there is a great demand of higher education (HE) for bespoke high quality learning and teaching materials to be delivered online (Armitage, S and O'Leary, R., 2003).

Educational organisations focused in the delivery of Ergonomics training and knowledge cannot escape from this reality.

Until recently the design and development of courses has predominantly been the role of the academic or lecturer (Struthers, 2002). However, designing e-learning courses is not something that many academic staff are yet familiar with.

Conference online discussion

Both authors will be available on the designated slots to discuss further these issues in the Conference Discussion forum. Do not hesitate to exchange ideas and issues with us, we look forward for an enthusiastic and enriching collaboration and network of ideas.

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