Poster presentation

E-learning for sustainable development: A case study

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Increasingly organisations in the sustainable development sector are following global education and training trends and exploring the role of e-learning in their education, training and communication endeavours. -One such organisation is the United Nations Environment Programme International Environmental Technology Centre (UNEP-IETC).

UNEP-IETC, in collaboration with the Environmental Technology Centre (ETC) and Teaching and Learning Centre (TLC) at Murdoch University, has recently developed five e-learning modules on environmentally sound technologies and practices (e.g., sustainable sanitation, rainwater harvesting and wastewater reuse). The modules have been designed for use by national and local government decision makers, as well as non-governmental organisations and industry in developing countries.

Based on the circumstances and needs of the target audience, UNEP-IETC specified a number of design requirements for the e-learning modules. In particular, they stipulated that the courses should be developed in such a way that they were:

- *Translatable* into the official UN languages for wider accessibility.
- *Available online and on CD* because many users did not have reliable Iinternet access.
- *Easily amended* by non-programmers so that the modules could be modified on an ongoing basis to ensure that the information was current, accurate and relevant to the target audience.
- *Compatible* across platforms and Learning Management Systems.
- *Compliant* with e-learning standards, in particular SCORM.

Macromedia Flash was an appropriate technology to ensure that modules were compatible, compliant and available online and offline. However, designing the courses in such a way that they could be easily amended by non-programmers and translated into other languages posed a problem. This was solved by developing a tool that stores content (text, images and animations) outside the authoring system using XML files and pre-defined templates. Since XML files are text based and writable by any text editor, non-programmers can make amendments, translate courses into different languages and potentially develop their own courses. The development of the e-learning modules in this way provided the target audience and UNEP-IETC with the required flexibility for their use, reuse and management. This poster will demonstrate the five e-learning modules developed using this approach.