

Web-based course design on the basis of eduWeaver and advancements

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Key words: *E-Learning, Instructional Design, (Re-Usable) Learning Objects*

Abstract:

EduWeaver is a courseware tool that should enable instructors to create digital learning objects, which are conform to didactical standards, and to eventually combine them to a whole course. The course structure of course models, which were designed in eduWeaver, is hierarchically classified into four different layers. Via the export functionality in eduWeaver that relies on current standards, the course can be used in diverse learning management systems or within another environment as e.g. HTML Pages. Thus, courses can be exported in various formats, which have been upgraded by implementing current standards, such as SCORM 2004. In order to increase the attractiveness of eduWeaver for current as well as for future users, the tool has to be subject to an evolution-based development in the area of user interactions.

1 Introduction

The idea of developing reusable learning objects and thus gaining a modular assembly of courses led to the processing of eduWeaver¹. The frame for the design of learning objects and in succession of eduWeaver was the project eduBITE (Educating Business and Information Technologies) [1]. eduBITE, which was financed by the Austrian “Bundesministerium für Wissenschaft und Forschung” within the initiative “Neue Medien in der Lehre” (new media in education), targeted the deployment of teaching materials, instruments and a communication platform [2]. This means that teaching materials were generated in form of learning modules in order to use them within a multimedia environment; instruments were built “[...] to categorize developed material according to the IEEE international metadata standard.” [2] Figure 1 shows the settlement of eduWeaver within the e-Learning environment. In the centre LMS (Learning Management Systems) that support the importing of course (structures) according to SCORM V.1.2, SCORM 2004, XML or others, can be found. In order to provide the LMS with courses, eduWeaver can be used for course planning, administration, as well as for versioning, and this in sequence entails on the one hand to enlarged effectiveness for teachers and on the other leads to more convenience for students. Wiley states that first of all the provision of learning objects increases the speed and efficiency of the instructional design of courses and secondly authoring tools have to be able to operate across different platforms. The courseware itself as well as the content should be reusable for being able to consider different levels of complexity. [3]

¹ More information in eduWeaver can be found at <http://www.eduWeaver.net>. Please feel free to register for a free account for eduWeaver. eduWeaver itself is a web-based tool, i.e. no additional software has to be installed on a computer. Rather, all that is required is an Internet browser.