Towards a Unified Format for Describing Teaching Methods

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Abstract

This paper reports developments on a best description template for teaching methods, whose descriptive elements will eventually be mapped to the elements of the IMS Learning Design specification. The template was created based on (a) previous approaches to describing teaching methods devised by various international projects and (b) information requirements of teachers during different phases of understanding and applying teaching methods.

1. Introduction

Instructors’ practice of planning teaching has been in the focus of research with the goal to extract teaching methods that represent best teaching practice. This investigation is coupled with the hope that the documentation of best practice teaching methods enables other instructors to adopt these teaching methods \cite{1}. We define a teaching method as a learning outcome oriented set of activities to be performed by learners and learning supporters. Teaching methods are meant to be described in a generic form, independent of concrete content and institutional context. Examples of teaching methods are project-based learning or WebQuest.

Having the overall goal to map the best description format of a teaching method with the description structure that an e-learning standard such as IMS Learning Design \cite{2} offers, we asked “How are teaching methods best described?” Mapping a best representation of a teaching method with the IMS Learning Design description could either confirm the adequateness of a specification like IMS Learning Design or could provide a set of criteria that could be used to improve IMS Learning Design.

This paper reports the methodology and preliminary outcome of answering this question.

2. Description Template

To answer the question for the best teaching method description, fourteen existing description schemas for teaching methods were reviewed including pattern catalogues (e.g. \cite{3}), learning design repositories (e.g. \cite{4}), and pedagogic scenario collections (e.g. \cite{5}). These collections employed different descriptive elements (e.g. title, objectives, learning outcomes, activities, etc.) for describing teaching methods. In a first step, we analyzed the frequency of occurrence of descriptive elements. As a result we identified more than forty distinct elements. The top ten elements were: sequence/activities (14 occurrences), delivery context (13), educational approach (12), learner profile (12), name/title (9), group size (9), author (8), resources (8), goals/aims (7), and tools (7).

Hereafter, a method for a final selection of elements was established. The foundation for this process were outcomes of the Mod4L project \cite{6}, where information needs of instructors during browsing, selecting, developing, and implementing teaching methods were investigated. The main elements needed during each of these phases were then matched with the previously accumulated elements.

The reasons for creating a new template were that none of the existing description schemas had found wide-spread acceptance, and that the outcomes of the Mod4L project did not include the provision of a template that best supported instructors in choosing and applying teaching methods.

The methodology presented above resulted in a description template consisting of two sections: (1) a “teaser” section offering essential information for browsing and selecting, and (2) a detailed description section including application-oriented information. The teaser section, which would be shown as a short introduction during searches in teaching method repositories, includes the following descriptive elements:

- Name: name of the teaching method.
3. Evaluation and Further Work

Currently, about thirty teaching methods using the proposed description template have been collected from consortium members of the ICOPER Best Practice Network (http://icoper.org) and from instructors and researchers across the globe. Even though the template comprises 21 descriptive elements, complete teaching method descriptions are typically only about two to three pages long.

To evaluate the description template, we devised a two-phase evaluation method. First, we collect qualitative and quantitative feedback from people who contributed teaching methods using the template. Second, we ask reviewers to read teaching methods contributed by others and let them comment on (a) the quality of the teaching methods and (b) the structure of the template. Using data obtained in these two evaluation phases, we plan to revise the description template, i.e., adding, modifying, and removing description elements. Results of both evaluation phases will be available at the workshop.

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4. References