eCH, A Course Help Tool for Teacher

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Abstract. Many tools have been developed as high-level tools of Learning Design. However, few of them concern about the teacher’s perspective. This paper proposes a platform for generating online course structure adapted to teachers’ profile. Based on quantitative research, teacher’s features are observed and integrated into Unit of Learning models, and these models are presented in the platform e-Course Help, using a presentation of terms and structures distant from the IMS LD specification.

Keywords: Unit of Learning, Learning Design, thinking style, teaching style.

1 Introduction

Based on Learning Design (LD) specification, a boom of Learning Management System (LMS) and Learning Content Management System (LCMS) tools appears in the current e-learning domain. Normally, an LD specification for a Unit of Learning (UoL) is designed to be independent of any delivery environment.

Griffiths et al. [1] identify five basic user roles (not exclusive) with Learning Design tools: participant in educational activities, staff who set up UoLs, adaptors and assemblers of UoLs, designers of UoLs, and developers of tools for LD. According to this category, the LD tools vary greatly in the degree to which they require users to be knowledgeable about the specification. Griffiths et al. classifies the authoring tools dedicated to the design of a unit of learning in two categories: “Low-level” tools (using a presentation of terms and structures close to the IMS LD specification) and “high-level” tools (using a presentation of terms and structures distant from the IMS LD specification).

Among these tools, many are focusing on learner’s profile while few attempts have been done to consider the features of teachers, another important group of educational practitioner. The reasons of this phenomenon are not only the complex influence of teacher’s cognitive and epistemological knowledge, but also the hardness for normalizing and modelling some teachers’ characteristics; teacher’s pedagogical preferences cannot be deduced by the system.

In this paper, we propose a method to solve this problem, making the system informed directly or indirectly about such preferences. Derived from netUniversité [2], [3], we develop portal eCH adapting UoL models to teachers’ personal psychological and pedagogical preferences. The construction of eCH platform is based on IMS LD [4], which is the de facto standard of learning design.
2 Research on Teacher’s Feature

The focus of learning design has transferred from the learning process to learning activity. In our work, we focus on teacher’s decision making for pedagogical activities that are manifested in our platform. Which activities are good for certain pedagogical situation is from the teacher’s belief on “what is good pedagogy”; and the belief is established according to their stable (or relatively stable) characteristics in their working context. The following research discovers these characteristics and provides implications to help teachers make decisions for pedagogical activities adapted to these characteristics.

2.1 Teaching Style

One stable element we observe is teacher’s teaching style, which can be viewed “as a broad dimension or personality type” that encompasses an educator’s approach, attitude, or beliefs towards teaching that can be observed over time [5]. Hoyt and Lee have defined teaching style as the way by which various teaching approaches are combined [6]. Each “style” resembles a “recipe” in which the ingredients are pedagogical approaches.

From the points of view of Pratt, a teaching perspective “is an inter-related set of beliefs and intentions that gives direction and justification to our actions”[7]. Teachers develop the teaching style based on their beliefs about what constitutes good teaching, personal preferences and abilities, and the norms of their particular discipline.

Teaching styles tend to become ingrained after many years of practice and can be difficult to change unless teachers receive intensive feedback or are influenced by powerful stimuli [5].

2.2 Thinking Style

“Cognitive styles” and “thinking styles” are frequently used in the research of psychology, because they are similar in a fundamental way [8]. Tennant’s definition of cognitive style [9] is “an individual’s characteristic and consistent approach to organising and processing information”. Cognitive style is considered to be a central and unchanging part of the individual’s personal and psychological makeup, it also describes one’s preferred approach to use the information he or she has perceived and remembered to solve problems.

Sternberg et al. propose a theory of thinking style intended to help illuminate the differences in the way people think, contending that there are different ways in which people use their abilities; those preferred ways are construed as “thinking styles”[10]. Sternberg draws parallels between the way that the individuals organize their thinking and the way that society is governed and identifies thirteen thinking styles, grouped in five dimensions: function, forms, levels, leanings and scope of mental self-government.

Although there appear to be various conceptualizations of cognitive styles, most of the researchers agree that cognitive style or thinking style is relatively stable over domain and time.