Collaborative Lesson-preparing Environments: EduWiki Designing and its Applications

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Abstract: Eduwiki is a version of Wiki integrated educational special needs aims to support collaborative lesson-preparing. The paper described the workflow and function of developing Eduwiki. The framework of Eduwiki and its applications were demonstrated in details, focusing on collaborative authoring, history-version comparing, Tag, modification reasons and other mechanisms. These mechanisms are effective in monitoring and recording processes of lesson-preparing. The evaluation of teachers are the important reference standards for further improving availability of Eduwiki.

Keywords: collaborative Lesson-preparing, wiki, Eduwiki

Introduction

Most teachers think lesson-preparing is more of symbolic than real value because many of them don’t devote themselves anymore to the routine work. Thus, it has been a long time to explore effective models of preparing lessons in China. In this paper, EduWiki is introduced to break through limitations of lesson-preparing as a simple warm-up exercise before class and will play a key role of promoting teacher group professional development and quality of their teaching.

1. What about wiki brings to lesson-preparing reform?

In China, individual or collective lesson-preparing seems that they are lack of new curriculum ideas. Electronic lesson-preparing makes the role of information technology is suspected in the lesson-preparing process. Wiki may reduce this suspicion because of its unique properties. Wiki is a collection or network of Web pages containing information that can potentially be edited by any participant (Leuf & Conningham, 2001). It brings the following three aspects to lesson-preparing reform:

- It makes lesson-preparing develop from "reading" and "downloaded" online resources to "writing" and "cooperative building".
- Asynchronous communication mechanism can unburden fear of authority and express oneself views.
- Building networked collaborative learning environments based on wiki is suitable for individual and collective lesson-preparing.

Eduwiki has been put forward under this condition. It is defined as following: Eduwiki
is a new knowledge innovation groupware system that supports development of school characteristics and promotes teachers group development under the guidance of community of practice. It utilizes wiki technology to establish computer-supported cooperative work (CSCW) environments that is suitable for special educational needs.

2. The function and structural design of Eduwiki

2.1 The workflow and function of Eduwiki

The process of Eduwiki developing will be planned according to development research (Seels & Richey, 1994); Figure 1 shows clearly the development process of Eduwiki.

The educational masters who studies in Zhejiang Normal University are been interviewed in field or via Internet. Summarized their views, it conclude that Eduwiki must consider teachers’ heavy burdens and it should avoid adding additional burden for teachers’ free time.

Generally, Eduwiki should be a powerful tool for building an innovative learning environment for teachers to cultivate teaching and learning knowledge (PETRIDES & GUINEY, 2002).

2.2 The structural design of Eduwiki

Eduwiki is a collaborative lesson-preparing system, which can be used as an independent and integrated learning management system. So Eduwiki is of notable features compared with other wiki system:

**Modular designing:** The Figure 2 shows the top four menus and corresponding
second menus. It provides a creative space where learning, innovation, and works can be integrated at three levels: one bottom-up, starting with individual and ascending to group and to organization; the other top-down, adopting the reverse approach (Senteni, 2006).

**Visual editor:** Eduwiki allows visual formatting of each page with the convenience of an inbuilt editor-HTML Area editor, similar to Microsoft Word. **Encouraging mechanisms:** Eduwiki encourages teachers brainstorming combined corresponding incentive mechanisms. Teachers are motivated to contribute to collaborative work; and moved to the attentions as authors.

Eduwiki takes effective measures to prevent free-rider effect of electronic lesson-preparing. The modification reason is requiring teachers to write their own thoughts to participate in the collaborative process. History-version comparison is still important to monitor each teacher’s contributions. Specially, history versions track and record the contribution of teachers in the course of collaborative lesson-preparing. Commenting on the works of participants is as well as supervision.

3. **The application methods of Eduwiki**

3.1 **Case of collaborative lesson-preparing process**

Figure 3 shows a case of collaborative lesson-preparing in Eduwiki, a lesson plan which was edited by a teacher in Eduwiki online editor. Each users belonging in the same group can directly access it and can push pages through group, RSS and Tag, making it be able to get prompting attention. If the author invites other teachers to participate the course, the invited teachers can receive an invitation for joining in the teamwork.

Figure 4 (on next page) showed a teacher, who was invited, has modified the original plan. The participant added the modification reason on why to modify. Modification reasons, as a required item, will effectively prevent teachers changing arbitrarily and promote teachers’ reflection. The participant also used special notations to delete and add contents; this can give a clear revision. The Tags has also been changed by the participant. This process can ensure the whole collaborative work realize its value.

3.2 **Using Eduwiki for implementing teamwork activities**
EduWiki isn’t a platform only for improving conventional lesson-preparing; instead, it forms a common environment for group discussion and negotiation further. This builds an ecosystem-based concept of teacher communities of practice and finds a new way for teacher professional development. Eduwiki can form a new school-based training model (see Figure 5.):

practice + participation + collaboration + reflection = personal development + group development.

Eduwiki has been used in some schools and has received many positive comments and assessments. But it need further practices and gets more experiment data.

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References