The model research of the teachers' knowledge management support system based on Web

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Abstract

In the paper, we mainly introduce the characteristic of the teacher's personal knowledge management. Then, web technology is simply introduced. In the last, we make the function design of the teacher's personal knowledge management system based on web. And we give a part of modules function design.

Keywords: teacher's personal knowledge, management, Web

1 Introduction

At present, people have enter the age that the information and knowledge grows rapidly with the development of the computer and ICT technology. Meanwhile, people more and more rely on the E-learning ways to access to information and society knowledge. Therefore, the E-learning ways include Web-based learning, Web-based collaborative learning and so on will become the main way to obtain relevant knowledge for people. When E-learning has become as the development direction for education today, the effect of the personal knowledge management will be more and more important. However, the personal knowledge management is a new concept. And the tools about personal knowledge management are not a lot in the market. Many literatures recommended the way of SNS (Social Networking Software) to realize its management. But it exits some disadvantages which is not suitable as a teacher's personal knowledge management tool. The existing research on knowledge management has a lot at home and abroad, but most of them are for organization's knowledge management or the enterprise knowledge management. Relatively, the research about teacher's personal knowledge management is less, and most are theoretical and not practical.

In this paper, we selective analyze the characteristics of teacher's personal knowledge management and the basic functional requirements. In the end, we develop a system of the teacher's personal knowledge management based on Web.

2 Summary of knowledge management

2.1 DEFINITION AND CLASSIFICATION

Knowledge is the product of the integration between subject and object. It is not only objective but also a kind of subjective reflection of objective things. According to the attribute of knowledge, it is divided into Know-what, Know-why, Know-how, Know-who. Where, Know-what refers to the objective facts. Know-why refers to the

objective law of things and principles of knowledge and belongs to the science category that we usually refer. This kind of knowledge production are done by specialized agencies of experts and scholars in general. Know-how refers to a skill and ability to do something. Its typical application is the enterprise development and keeping on its internal technical know-how or proprietary technology. It is a special type of information and is often referred to as technical information and business secret which belongs to the category of technology. Know-who can be understood as who and how to create knowledge, which is focuses on the creation ideas, methods, means, process and characteristics and so on. That is the category of the experience and judgment usually. According to the presentation of knowledge, it's divided into the explicit knowledge and tacit knowledge. Explicit knowledge can be defined and accessible. It can be expressed in words, scientific program, or figures and can be communicative. Tacit knowledge is the highly individual knowledge. It's a kind of subjective knowledge based on the long-term accumulation of experience and it can't be used a few words, several groups of data, or formulas to express.

2.2 PERSONAL KNOWLEDGE MANAGEMENT

Personal knowledge management is a branch or a subset of knowledge management. It breeds from the matrix of knowledge management. Present research mainly focus on the understanding of personal knowledge management connotation and put forward feasible two aspects of personal knowledge management's implementation steps.

2.3 THE DEFINITION OF THE CONCEPT LEVEL

Frand and Hixon (1999) refer to the definition of personal knowledge management, that's, it is a conceptual framework and refers to that the individual organization focus the important information you think yourself to be a part of our own knowledge base. It will also provide a strategy that put some scattered pieces of information into something can be systemic application. It's as a way to

expand our personal knowledge [1].

2.4 THE DEFINITION OF ACTUAL OPERATION LEVEL

Treating the personal knowledge management as the techniques and methods on the level of actual operation is actually an overview of the process of knowledge management involves. These processes include creation, classification, indexing, retrieval, distribution and to reuse a knowledge value assessment. The process itself is also a combination of each other. These knowledge management methods is actually a series of successive movements and actions of managing knowledge dimension in daily work.

Regardless of the definition of the personal knowledge management from the concept level or the practical aspects, it can both be seen one thing in common. That's, the personal knowledge management is based on the level of someone personal knowledge. By effective processing and extraction based on existing knowledge, people absorb knowledge for them own. Finally, personal realize their knowledge innovation by activating their tacit knowledge. Therefore, we believe that personal knowledge management should be regard people as center. And on the basis of information, regarding knowledge innovation as the goal and a kind of management thoughts to develop resources.

2.5 THE CHARACTERISTIC OF TEACHERS' PERSONAL KNOWLEDGE MANAGEMENT

Teacher's personal knowledge management refers to the management of the knowledge acquisition and accumulation, sharing, innovation and the evaluation process in daily life and teaching practice. Teachers' knowledge management does not simply copy, but also adjust the original knowledge structure quickly on the basis of extracting the knowledge needed. It makes the tacit knowledge be innovated and makes share communication with others come true. Finally, it encourages individuals scattered knowledge systematically and creates the new knowledge. It has the following characteristics.

1) Explicit knowledge is easy to collect and classify. Part has the high value of repeated use.

2) Tacit knowledge is the main object of teacher's personal knowledge management.

3) Teachers' personal knowledge management focuses on making the recessive knowledge be made explicit

4) The tacit knowledge of teacher's personal knowledge management is mainly innovated through the analysis of teaching reflection.

3 Web technology

Web2.0 technology is integrated by some social software such as blogs, wikis, Rss, Diigo. It is achieved through these social software and new theory [2].

1) The complete Blog concept generally includes three aspects. That's, firstly, it is that the main content is the personalized expression; second, it is in the diary way and frequently updated; finally, it is that it makes full use of the link, expands the content and scope of knowledge and the contact with the other blogs [3].

2) Wiki is a collaborative writing hypertext system of virtual community. Where, for the Wiki text everyone will view, create, change, giving their views or extension and discussion on common themes.

3) Rss is a way that content is shared between the site and the site and it is sent to subscribers. Let users don't have to visit the web site and can find the website content updates. It has the characteristic such as information gathering, filtering, information transmission and the information sharing.

4) Diigo is a social software tool which can label and classify the network information, groups, and other materials. It can give more decisions to the network users. Everyone can choose the network information, comments, processing and become a source of information. Therefore, it makes the entire network into a writable, participation, interactive media [4].

4 The Function design of the teacher's personal knowledge management system

Teacher's personal knowledge management system mainly include teaching reflection, network abstract (RSS collection reading), personal information management, records, communication online, learning community, background management. It has seven modules in total. Profile function diagram and part of modules function design as shown below Figure 1, Figure 2 and Figure 3.
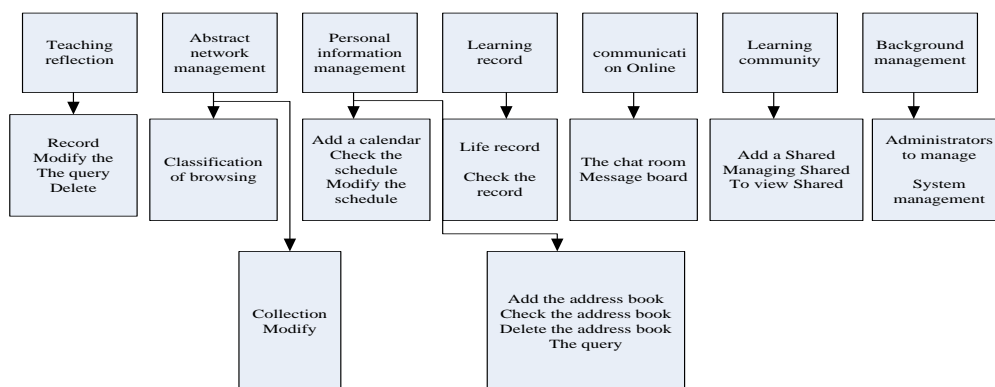

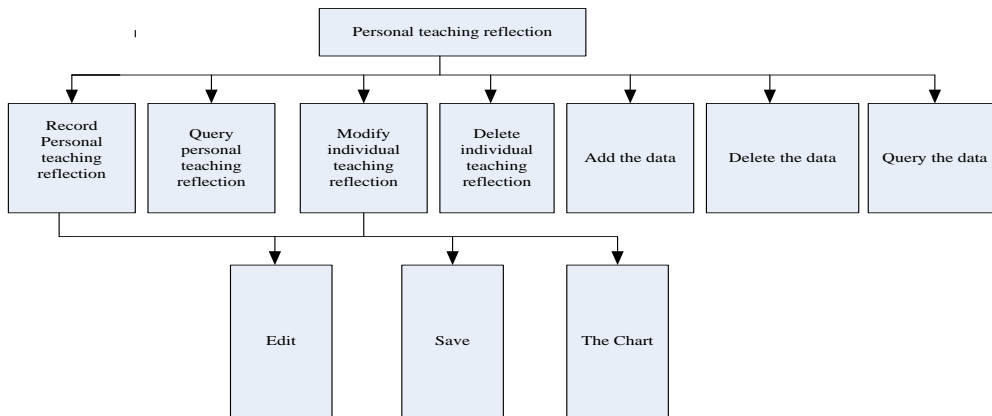FIGURE1 Teachers' personal knowledge management system framework

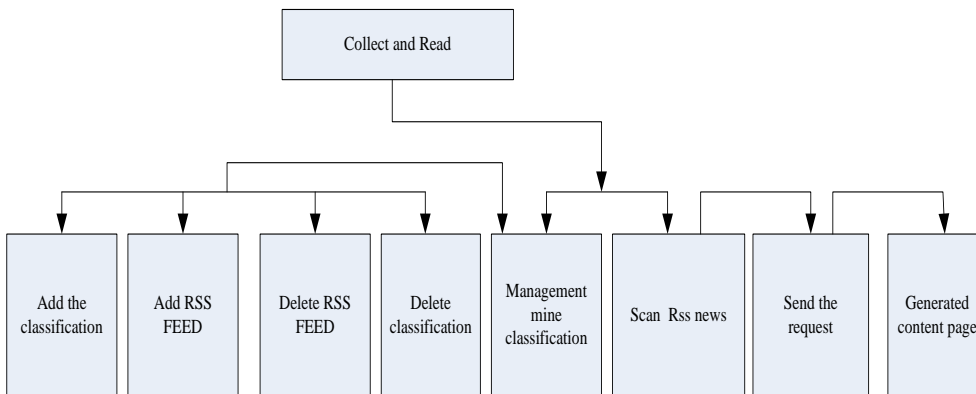FIGURE2 Teaching reflection module function in detail

FIGURE3 Abstract network module function in detail

5 Conclusion

Firstly, in the paper, we expound the basic theory of knowledge management and analyze the characteristics of teacher's personal knowledge management. Then the web technology is simply introduced in this paper. Finally the function of the teacher's personal knowledge management system has been simply introduced. And it lists a part of the modules design. The specific use of UML modeling doesn't introduced because of the limitation of space here.

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