Investigation of Educational Technology Training Platform Based On Moodle

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Abstract: *Moodle is based on social constructivism theory and provides new training platforms and models for the educational technology training. This paper analyzes the problems on the training of the teachers in NCIST, and introduces the advanced educational ideas of Moodle and its advantages and characteristics. The paper also show the training contents, learning objectives, training process design and other training activities of the educational technology training platform based on Moodle*

Keywords: Moodle, educational technology, training, resource, activity

1. Introduction

Educational technology training is an effective way to enhance the willing and skills of teachers to make use of modern educational technology. Modern Educational technology Center of North China Institute of Science and Technology has hosted tens of educational technology training for more than 1200 teachers and got sound effects. However, there were many challenges and restrictions while training, such as short time on training process, onefold method, lack of communication platform to raise the enthusiasm of trainees.

Moodle, Modular Object-Oriented Dynamic Learning Environment, is a popular informational management platform [1]. It can make it easier to share resources, improve the teachers' working environment and influence the teaching method. With its advantage of its open source characters, based on activity theory, teachers can design and manage training more reasonably and improve training effects [2] [3].

2. characters of Moodle

Moodle is built on social constructivism theory and allow participants to think, discuss and cooperate collaboratively to resolve problems. As an open source course management system, Moodle integrates website features and implements functionalities such as bulletin board system, forum, downloading, uploading, and creating various types of items. Further more, it supports any type of popular electronic documents, slides, animation and video[4].

2.1 advanced education thoughts

Moodle insists education philosophy thoughts, and the design and implementation follow social constructivism theory. It distinguishes from traditional education by its design of activity and resource, which provides learners a resource space and a platform to take part in activities. Activities include SCORM/AICC courseware, wiki, work and vote stc. Resources include text page, web page, link to file or web site etc. Figure 1 show the primary activities and resources in Moodle.

2.2 simple operations

Moodle does not require high level computer operation skills. Any people acquiring basic computer operation skills and ability to use IE explorer can operate Moodle conveniently. Moodle platform unify the display of the UI and data model management of backend, so users can edit any thing of backend in UI by a method of "What You See Is What You Get". Moodle platform manages all the functionalities by dynamic modules. System manager can install and uninstall any module flexibly. Teachers can also determine the display location of these teaching

modules when using them and move, close and modify them as their willing.

2.3 comprehensive course management and support

Teachers can control all settings of a course by Moodle platform. It can manage course resources by the type of the course, and it also supports human resource and time schedule management. For human resource, Moodle can manage the information of teachers and trainees dynamically by database technology, and can set authority of them based on database authorization management technology.

As an open source software, Moodle has great extendibility. When new requirements from trainers come, developers can develop corresponding modules that can integrated into Moodle as plug in.

3. training course design under Moodle

Moodle based training course is interactive activity between trainers and trainees under the virtual environment provided by Moodle platform. In the practice of this paper, the trainers and trainees are all teachers. The trainer teachers are the directors of activities, and the trainee teachers are the subjects of activities [5] . The training course activities are designed on the elements noted in the previous part of the paper.

3.1.content design

The primary content of educational technology on teachers includes educational technology theory, basic educational technology skills and outstanding teaching cases study etc. The courses are divided into first level courses and second level courses. The first level courses include introduction to educational technology, basic informational technology, video processing and pictures capturing and processing. The second level courses include developing digital video software, design and implementation of web page, network teaching and knowledge management, multimedia courseware development and animation development.

3.2.training target design

The target of educational technology training on teachers is to refresh education concept of teachers, optimize teaching methods, acquire sufficient educational technology and theory, optimize the usage of current resources. Based on this, teachers can integrate informational technology and their courses. To specific target of a course, trainers should list specific teaching task, outline and target according to the internal characters of the course and the situation of trainees.

3.3.training process design

Moodle based educational technology training on teachers can be divided into the following steps. (1) add resource -> (2) trainee registration -> (3) login the course -> (4) remote communication -> (5) face to face training -> (6) theory exam -> (7) upload works.

4．conclusion

Educational technology training platform based on Moodle makes use of the trainee teachers spare time sufficiently and improves informational technology and course integrating ability. It can help teachers to understand the usage of modern educational technology on teaching more thoroughly. It also facilitates the innovation of teaching philosophy, teaching contents and courses organization. By using Moodle platform, educational technology training is not only face to face teaching, but also offline and asynchronous communication. Training time is extended to all available time which increases effective training time tremendously and enhances training quality. After teachers are trained by Moodle platform, they also can apply Moodle into their own teaching practice and utilize the advantages of Moodle so that their students can also benefit from it.

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