Internet Virtual Community - An Implementation of the Instructional Model of the PBIALS based on the PBL Theory

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Abstract

This paper implements an instructional system, called *Internet Virtual Community* (*IVC* for short), according to the instructional model of the *Problem-Based Internet Assisted Learning System* (*PBIALS* for short), a previous research result based on the *Problem-Based Learning* (*PBL* for short) Theory. In order to achieve the instructional model of the *PBIALS*, four phases are developed for the instructional process include the phase School I – III and the phase Outside School. To ensure the instructional system is work and useful, a teaching unit – Dream Computer is constructed for the *Basic Computer Concept I*, the first year course of the *Information Program* in Chi-Ping Vocational School, Taiwan. A self-designed questionnaire is also used for collecting the feedbacks responded from the students and evaluating the instructional model/process/system proposed by us.

A *PBIALS* – Internet Virtual Classroom

According to the instructional model of the *PBIALS*, this paper designs an instructional process including three major phases in school and one for outside school. They are *School I*, *School II*, *School III*, and *Outside School*. Figure 1 shows the whole instructional process. Based on the instructional process of the *PBIALS* designed in this paper, an experiment *PBIALS* are designed in *IVC* (*Internet Virtual Community*), which is a web-based learning system with community architecture supporting *Personal Tools*, *Team Tools*, and *Database*. The system architecture of the *PBIALS* is shown in Figure 2.

An experiment system of *PBIALS*, *IVC*, is developed for the Information Program of Chi-Ping Vocational School, in Taoyuan, Taiwan. The course we chose to teach is the *Basic Computer Concept I* in the first year students' course. Our participants, the first year students of *Information Program*, are totally 53 people (51 males and 2 females) in the class and are over 90% students own *ADSL* instrument to assess internet at home. In our experiment, the teaching unit, *Dream Computer*, is taken. A self-designed questionnaire (http://140.135.103.7/PBIALS/questionnaire.htm) is sent to students after the whole instruction completed.

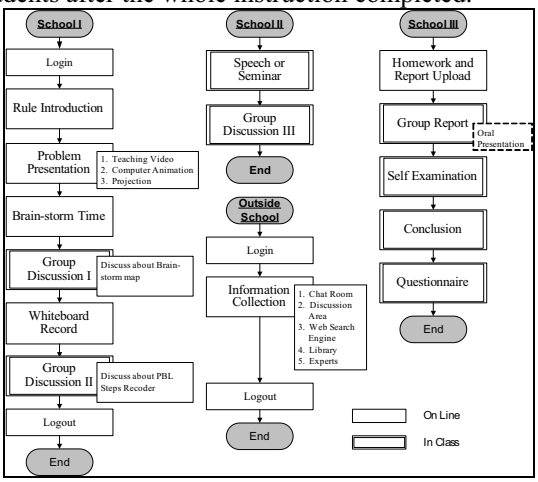

Figure 1. Instructional process of the *PBIALS*

Conclusions

In general, after evaluating the feedbacks responded from students via the self-designed questionnaire, the instructional model of the *PBIALS* proposed by us has been proved that the *PBIALS* has good positive effects to the students and worth to popularize. However there are several works should be done in the near future.

1. Making user interface friendly for the tools in *IVC*.
2. Providing the sharing mechanism for both of the *Brain-Storm Map* and *Whiteboard*.
3. Providing the *Leaning Status Monitor* for the teacher.
4. Integrating the *Data Mining* techniques to analyze the learner behaviors in the *PBIALS*.

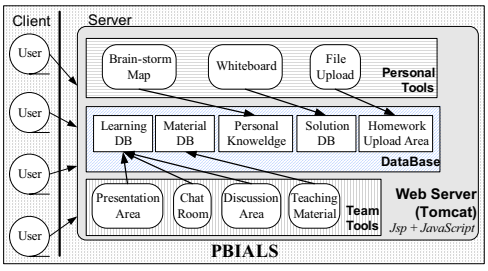

Figure 2. The system architecture of the *PBIALS*

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