Online examination

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Abstract

While there is an enormous amount of material to study, the usage of internet technology is increasingly shielding the need for textbooks. Currently, students spend lot of money for textbooks, while study material is available on the internet. This internet-based examination system is flexible for teachers to set and control the student examinations. There are many features like information sharing between users, departments, institutes, and other interested groups are included in the new system.

Key words: **privileged and none-privileged users, department, Institutes, Publishers, Authors, Research Centers, Interested Groups, Corporations, Distance Learning**

1. Introduction

There are many online examination systems on the market: A Web-Based Examination and Evaluation System for Computer Education [1], Mixed-method validation of pedagogical concepts for an intercultural online learning environment [2], Using the tablet PC in a collaborative learning environment [3], and Online annotation- research and practices [4]. These systems have their uniqueness and solve specific problems for the online education, but they do not solve the problems, such as information sharing between departments, institutes, publishers, authors, research centers, interested groups, and corporations. The current system and many systems in markets have many similar features like:

- Store the questions and answers in database
- Display result after submit the examination
- Multiple or single-choice answers, and fill in answer
- Base on internet-based test
- Study guides
- Use for a specific type of examination such as ACT, MSCE, JAVA Certificate, etc
- Generate test answer program

The current internet-based examination system solves the above problems and ensures the quality of the examinations. The system was implemented in year 2007 on Linux operating system at Grambling State University and currently in testing stage. Complete analysis and design of system using UML diagrams is available.

Preliminary demonstrations were successfully conducted.

2. Uniqueness of the new system

The objective of the new system is to target the problems that relates to information sharing between departments, institutes, publishers, authors, research centers, corporations and interested groups which is the limitation on the current system that has been built. The new system is designed to meet the proposed objective of reliable, controllable and flexible examination system and information sharing. Various facilities are briefly discussed below:

Departments: This system allows professors to exchange questions banks between and within departments depending upon the type of examination. The Department Head or Controller could monitor the examination for the desired standard.

Institutes: The Institutes share curriculums, class materials and questions' banks will have better advantage of the new system.

Distance/virtual learning: They can benefit from this system because the information sharing between institutes and other organizations are available and easy to locate.

Publishers: The institutes can collaborate with publisher companies to share enormous of journals, book records and references that allow students to do research for a specific topic. Publishers can establish a difference type of book for a difference type of questions' bank.

Authors: It is also important for authors to have direct communication with users. The authors can setup reference sources, and question banks that relate to the book. The professors can retrieve the questions from the authors' question bank that can be shared within the system among privileged users. One question bank can be set for practical examination or quiz, and another question bank for the final examination; in addition, the authors can update the question banks. The author could be under the control of the publisher companies.

Research Centers: They can locate the right candidates that interest in a particular research topic by collaborating with institutes, interested groups, or organizations, and it is allowed students to learn about the research that could be benefit for their major;

furthermore, it will prepare them for their internship and for future research.

Interested Groups: They can form their own groups and do research for a specific topic or interest is easier because the study or search materials are available for them; furthermore, they could communicate with other organizations to fund their research.

Corporations: The alliance between institutes and corporations are benefit for students. Corporation can sponsor students financially for theirs research, it could be the corporation' research or the academic research; in addiction, the corporations can save time to look for the right candidate for the internship or to join their workforce.

The features of the new system:

- To register for a class, a user must have an ID from a privileged user
- To generate questions and answers randomly, to minimize cheating and maximize accuracy of student evaluation from the system.
- To share questions resulting in a more efficient design of the system
- To discuss the study material though forum between users
- To collaborate between corporations to finance students research and other academic projects
- To collaborate between publishers and authors in order to share enormous study materials, such as references, book contents, sample chapters, practical exam/quiz, and questions banks
- To allocate dynamically the study material for users
- To connect the users to the research group
- To analyze the students performance from one school to the others

3. Implementation of the current system

This system allows privileged user to create register Id for student, the questions banks for the exam or quiz, and also enable or disable students' account. In addition, the privileged user can add, create, modify, and delete question banks. The privileged user can schedule, cancel, and view the examination or quiz, and also post information on the blackboard. Furthermore, this system has limited the non-privileged user to access other accounts; non-privileged user can take and view the examination or quiz only. In order for the students to be part of the system, they have to have a register Id from the lecturer. The lecturer has to register in the system before they can create registers Id for students. The register Id allows student to register in the class.

4. Result and contribution the current system

The parts of this system was implemented successfully and demonstrated as part of the capstone course. The project design was done at University of Science Malaysia (USM) and implementation and demonstration was done at Grambling State University as part of the graduation requirements. The extract features have been added to improve the system functionalities, and to solve the current system weakness. It allows information sharing that will reduce cost and time to retrieve the information, and also to improve the quality of the education.

5. Conclusion

The proposed of the new internet-based system works as a multipurpose system. This research project will provide benefit to the society then the current systems; it will allow the institutes to exchange information between departments, institutes, and other organizations. Moreover, this project will create a standard for all institutes. It gives research centers and corporations to locate the talent students; the talent students could look for sponsorship for theirs research. Furthermore, this system will allow the interested groups to form their own group that according to a certain standard.

6. Reference

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