SCORM Based Online Assessment Objects for Computing Skill Evaluation

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Abstract: e-Assessment which is most commonly known as online assessments has become a very integral part of e-learning based study programmes, offered by educational Institutes. One of the main reasons why educational institutes prefer online assessments is because it facilitates immediate feedback through automated marking and therefore it is possible to launch programmes in mass scale.

Generally, many online assessments are based on true/false or MCQ based approach to automate the marking process. Assessments done using above methods are limited to access different levels of knowledge. It is hardly possible to assess the skill of doing something. In other related studies, we have identified that students who have the knowledge do not possess the skill of doing it. This was observed when students are asked to do different activities using Microsoft Office Package. Therefore we have understood that assessing the skill level of students is a vital part when it comes certifying them as skilled users under a particular programme. The current method used to assess the skill is conducted manually as a lab based assessment where an instructor manually mark answer files of students. From the perspective of students we can note that this method is not very productive since they feel the pressure of physically attending and doing an assessment opposed to doing it online in their own place or at a place where they feel comfortable.

In this paper, we present an interactive, assessment objects based on MS Office package, and they are automated to mark the answers of the students. Even though, we develop assessment objects to conduct online skill assessments, it has two perspectives, where it can be used both as an Assessment Objects and as a Learning Object. In Learning Objects, students are provided with feedbacks based on their actions, and encouraging guidelines are given to proceed further. Where as in Assessment Objects, feedback is not given and the actions are recorded and scores are given based on those actions.

As the case, a course on MS Office package conducted at the UCSC was taken into consideration and questions for the assessment objects were developed based on this

programme. Our main objective was to produce interactive activates to access, students skill level on using tools available with Office Package such as Word, Excel and Access. The interactive activities were developed by simulating the MS Office package, to give the exact look and feel. Later these interactive activities were converted into assessments. Assessment objects can be considered as a question bank since it stores several questions from which a predefined number of questions are presented dynamically. Each question captures students' interactivity when he/she performs a task and based on the assessment criterion, scores are allocated for that particular question. When a student finishes all the questions given to him/her within a particular attempt, marks obtained by the student will be automatically displayed. Therefore students have the facility to obtain immediate feedback. Through the communication carried out between the assessment object and the LMS, statistics such as the results obtained, the time spent and status are recorded in the LMS. These statistics can be used by instructors for their record keeping purposes.

The pilot study was carried out after development, with both students and teachers. System evaluation was also done and presented in the paper.