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REVIEW OF DUBLIN INSTITUTE OF TECHNOLOGY'S E-LEARNING PLATFORM FOR EFFECTIVE TEACHING, FORMATIVE ASSESSMENT AND FEEDBACK

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Abstract

This paper investigates Dublin Institute of Technology's (DIT) 'webcourses.dit.ie' created for DIT with Blackboard Learning System software as an effective e-learning tool on a module in the School of Real Estate and Construction Economics in DIT. Webcourses.dit.ie is an e-learning platform providing support and assistance to both lecturers and students as part of their daily teaching and learning experience. Webcourses as it is known in DIT is both a course management system for lecturers and a computer assisted learning and assessment tool for students.

Prior to using the system class content was delivered by presenting electronic slides in class and subsequently presentations and related reading material were e-mailed to the students. Assignments including project submission dates were also handed out in class and then e-mailed. Problems existed with this type of course delivery. Some students did not receive course notes as they did not check college e-mail or were not registered on the e-mail system. Occasionally students did not receive notes and assignments due to non attendance, improper record keeping and poor transcription.

This research demonstrates the application of the system and how to harvest e-learning technologies such as Webcourses for effective teaching, quality management, formative assessment and feedback. The paper outlines the findings of the study and compares the use of the system to the original approach on the module.

The findings of this paper reveal that Webcourses has helped the lecturer in course management, assessment and support in enhancing interactions for learning. In delivering the module the study suggests the system's best use is not as a substitute to traditional lecturers and tutorials but rather an aid to the student and teacher for effective communication, administration and delivery.

Keywords: e-learning, computer assisted learning, course management system.

1 INTRODUCTION

This paper investigates Dublin Institute of Technology's (DIT) course management system, 'webcourses.dit.ie' created for DIT with Blackboard Learning System software as an effective e-learning tool on a module in the School of Real Estate and Construction Economics in DIT. Light et al. [1] describes "course management systems" as a recent substantial innovation helping instructors to organise and maintain their courses more effectively through Information and Communication Technologies (ICT). Webcourses as it is known in DIT is an e-learning platform provided by DIT to support and assist both lecturers and students as part of their daily teaching and learning experience. It is both a course management system for lecturers and a computer assisted learning tool for students. The author started using webcourses in a limited capacity in September 2008. The author had been teaching in DIT at that stage for one academic year and although he was proficient in many computer applications and web-based technologies there was no persistent culture in the School of Real Estate and Construction Economics in using webcourses or its predecessor webct. The author was unaware of the application and benefits of the system before he attended an introductory workshop. Prior to using webcourses lecturers were carried out on the module in Construction Studies 1A in the School of Real Estate and Construction Economics in DIT by presenting powerpoint slides in class and e-mailing the presentations and any supplementary course notes to the students sometime after for their review. This was a relatively easy process as the notes could be e-mailed to a class distribution list rather than have to input each e-mail address individually. The author noted however that many of the students e-mailed sometime after the original e-mail was sent, looking for a copy of the notes, especially approaching their exams. Once the module was set up on webcourses, the entire

course notes and related course material could be uploaded within the module and released on a weekly basis as the class progressed through the course. The students knew that the notes were posted on webcourses and no more e-mails were received from them requesting previously covered course material. This paper intends to demonstrate the application of webcourses on Construction Studies 1A on the BSc in Construction Economics and Management Degree in The School of Real Estate and Construction Economics in DIT.

2 USING WEBCOURSES

2.1 Setting up new module

To register a module the lecturer must complete an on-line application form for each individual module they wish to set up. The application form is found on DIT's Learning Teaching and Technology Centre's (LTTC) website. Once on LTTC's homepage the lecturer clicks on the '*Setup New Webcourses Module*' to make an application to set up a new module. The application page is shown in Fig. 1 below.

eLearning

Application to setup new webcourses.dit.ie module

Please note: You must complete a form for each individual module you wish to set up.

Please note: Modules are generally created within 4 hours of form completion. However, the start of the new semester is a very busy time for eLearning support so please allow for 2 working days from completion of the form to your module being created.

Lecturer details:

First Name:

Last Name:

Staff Number:

Phone Number:

Email:

Programme and Module details:

DIT Programme code: (the DIT programme your webcourses module relates to, e.g. DT413)

DIT Programme Title: (e.g. Event Management)

Figure 1. Application to Setup new webcourses.dit.ie module (<http://www.dit.ie/lttc/>)

2.2 Access to the module

Students and lecturers gain access into webcourses through the DIT homepage by entering a user name and password. After access is granted, students and lecturers are directed to their personal home page. As seen in the '*Course List*' in Fig. 2 below, lecturers are presented with a list of modules that they have registered, and students are presented with a list of modules that they have been registered on by the lecturer.

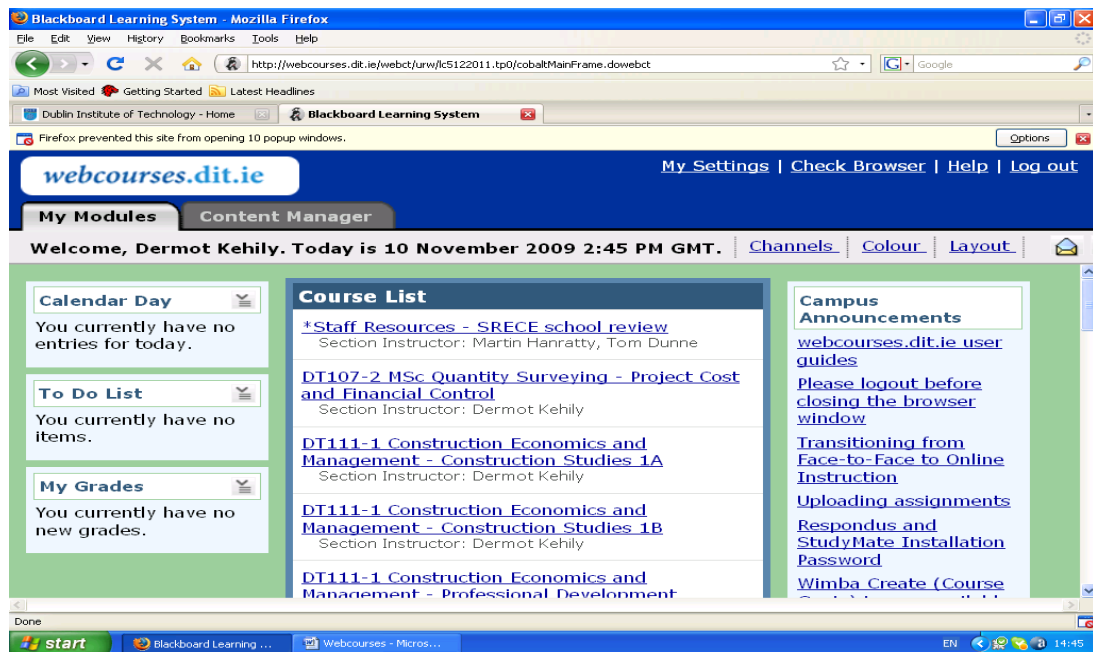


Figure 2. My Modules Course List

Clicking the mouse, for example on 'DT111-1 Construction Economics and Management – Construction Studies 1A' (Fig. 2 above) the lecturer or student can gain access to the home page of that module shown in Fig 3 below.

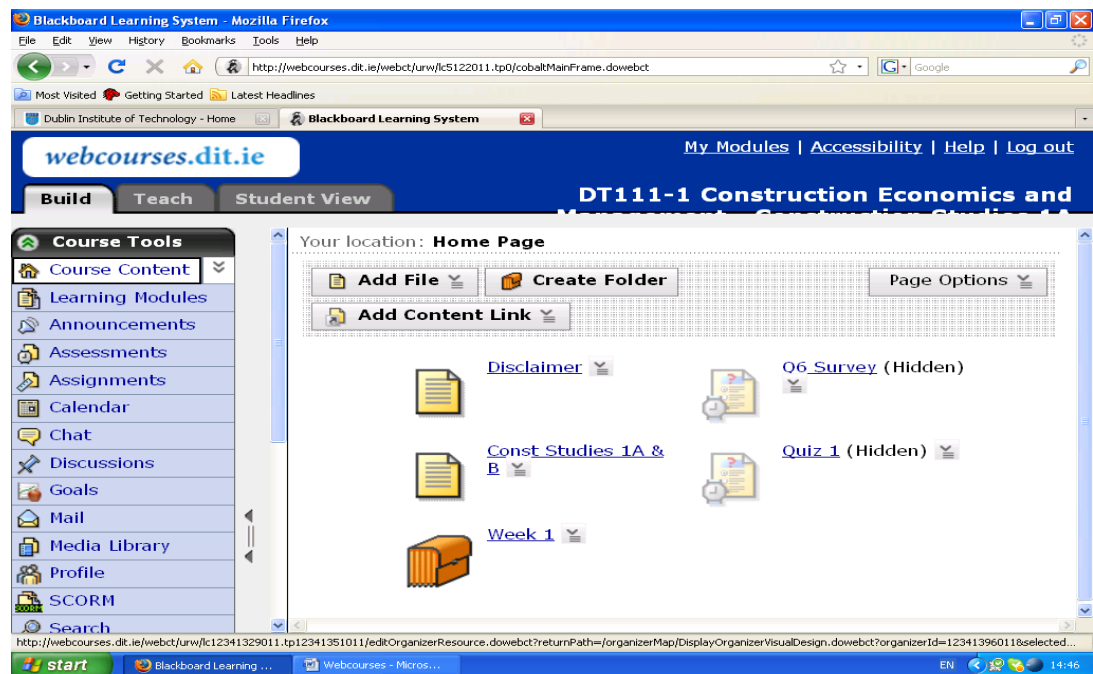


Figure 3. Home Page of Module

2.3 Uploading content

It is not the author's intention to go through the numerous tools in webcourses, as seen along the left side of the screenshot in Fig 3 above, but rather focus on how it can be applied as an e-learning tool for the module in Construction Studies 1A. The lecturer can upload for the student any relevant course material, module descriptors, folders, etc. onto the home page for easy access. In the lecturers webcourses module there are three tabs on the top left corner, 'Build', 'Teach', and 'Student View'. The student however will only see one tab, the 'Student View'. It is in the 'Build' tab that the lecturer composes his/her module and the 'Teach' tab that they administer it. As can be seen in Fig. 4 below,

clicking on the 'Build' tab and then on the 'Learning Modules' tab in the 'Course Content', the lecturer can add his/her lessons week by week or class by class (week 1-7 shown is shown in the screenshot). As the lecturer progresses through the module he/she may unhide the relevant learning modules so that the student can see them and access them in their 'Student View' tab.

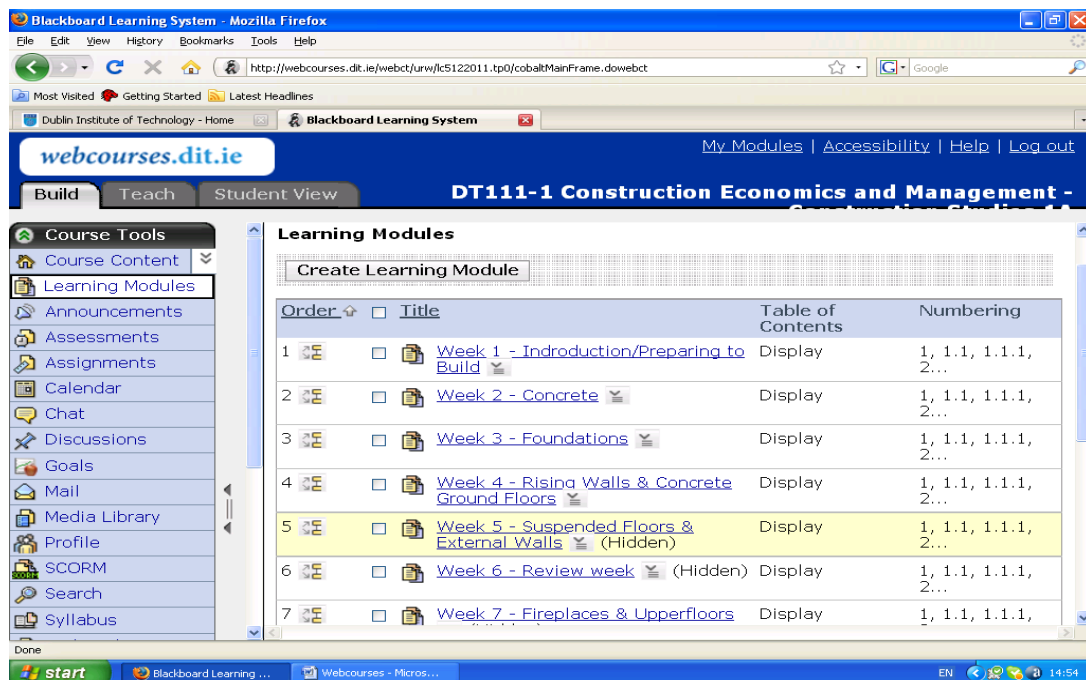


Figure 4. Creating Learning Modules

Uploading presentations and notes is not unlike attaching a file to an e-mail, as seen in the following illustration (Fig. 5).

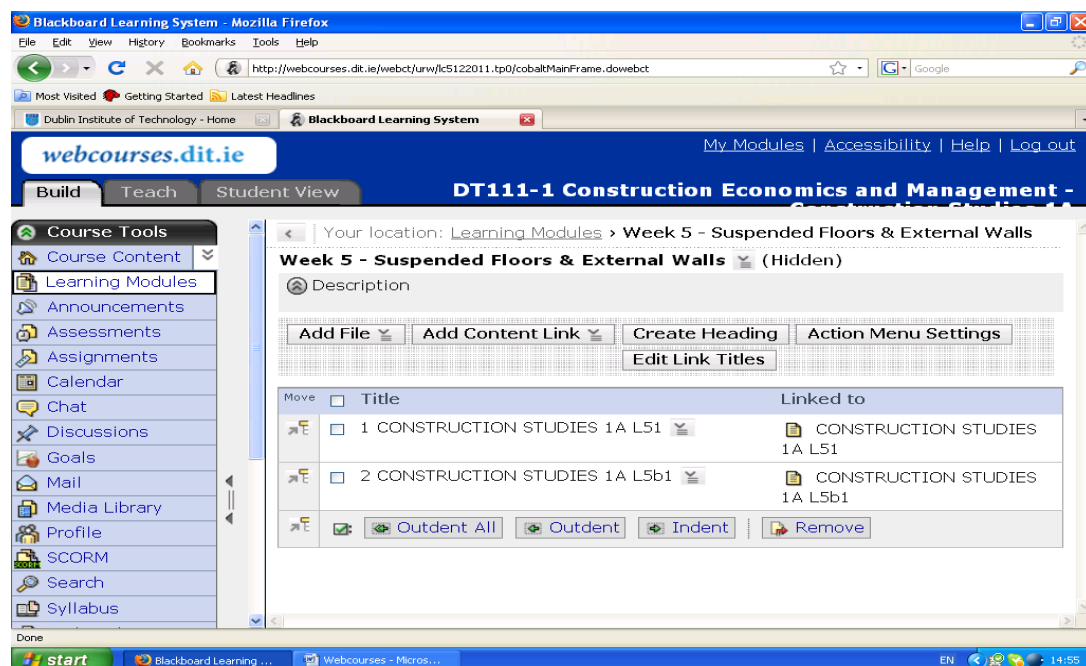


Figure 5. Adding Content (files) to Learning Modules

2.4 Assignments

Students assignments can be posted in the 'Assignments' tab of the course tools in webcourses as seen in Fig. 6 below. The lecturer can state the date and time the assignment is to be handed up, whether it is a group or individual assignment, add any relevant instructions and set the grading

criteria. The student knows an assignment is posted when a green asterisks (*) appears next to the 'Assignments' tab in the 'Student View'. The lecturer has the opportunity to ask the students to hand up the assignment in class on the designated date or upload it via webcourses in the student view.

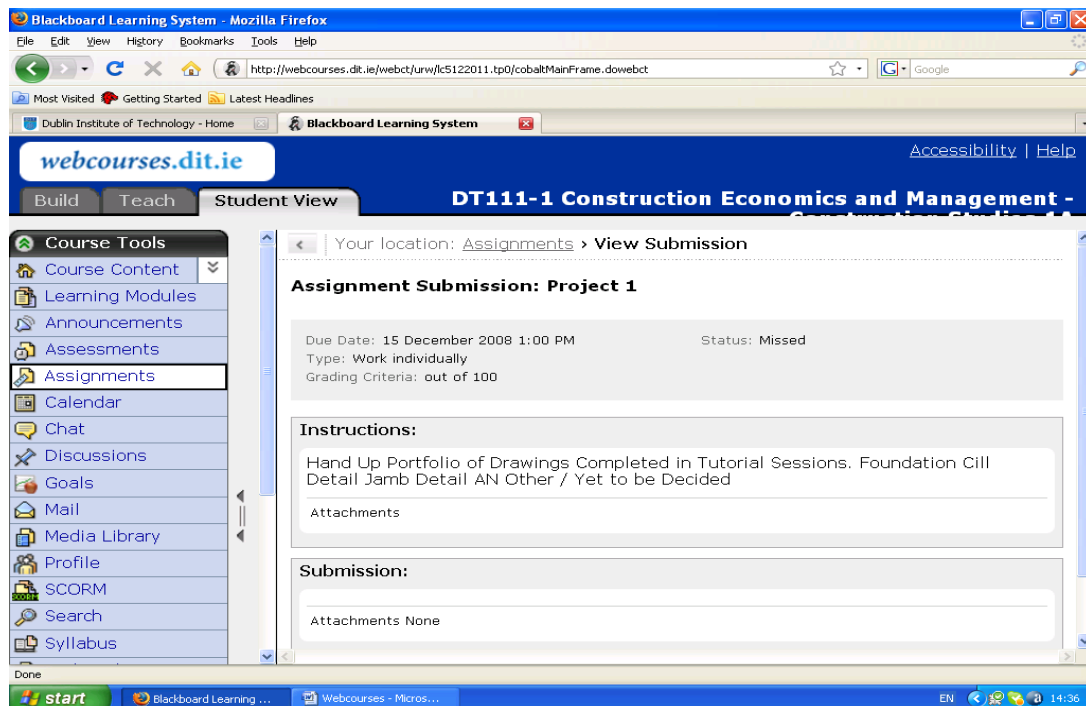


Figure 6. Assignments Course Tool

Once the lecturer has examined the assignment he/she has the ability to post the students marks on webcourses and provide feedback to the student. The students can access their marks and feedback by clicking the 'My Grades' tab under 'My Tools' in the 'Student View' as seen in Fig. 7. Privacy is maintained as the students cannot see any of the other student's marks or comments. This application saves the lecturer a great deal of time. Prior to this, a lecturer e-mailed each student individually with their grade and any relevant feedback or comments on their submission.

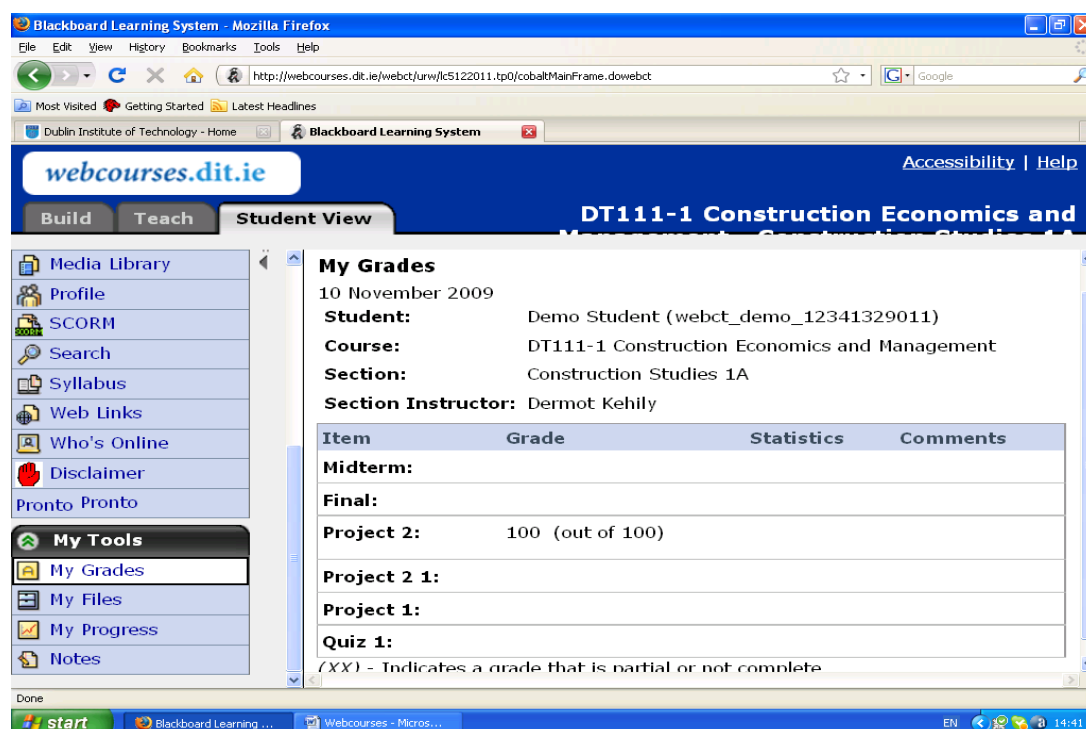


Figure 7. My Grades in My Tools

2.5 Assessment

Many instructors using course management systems are taking advantage of other features offered by the system, in order to support learning, by using online quizzes, discussion boards and other assessment measurers [1]. After a number of years using only the tools outlined above the author decided to carry out an electronic exam through the 'Assessment' tool in webcourses to determine its applicability in assessing the learning outcomes in the module. The author was reluctant at first to use this tool but other lecturers in different departments within the college gave encouraging feedback on its use. The author is a staunch advocate of continuous assessment especially in a practical module such as Construction Studies. However the author did encounter some plagiarism in coursework and was willing to introduce an element of closed examination to execute at least part of the overall assessment in a controlled environment. This was a departure from the existing assessment strategy and thus needed to be changed in the module descriptor. As can be seen in the extract of the module descriptor below (Table 1), the module was originally assessed one hundred percent by continuous assessment. The author split the assessment into two parts, continuous coursework assessment worth forty percent and an end of semester on-line exam facilitated through webcourses worth sixty percent. The author felt it was necessary to maintain an element of continuous assessment as the subject matter is practical in nature and an examination on its own would fail to address all the learning outcomes effectively and possibly limit the student in self expression.

Table 1 Extract from Module Descriptor

| Original Module Descriptor | New Module Descriptor |
|---|--|
| Module Assessment: Continuous assessment based on 2 coursework projects. 100% | Module Assessment: Coursework Continuous Assessment 40% End-of-Semester On-Line Examination 60% |

Clicking on the 'Assessments' tab outlined in Fig. 8 below the module coordinator/lecturer can add questions to a question database in the system. Subsequently the lecturer can select all or a number of these questions to create an electronic exam. When constructing the questions the lecturer can pick from a number of different types of questions such as, multiple choice, fill in the blank, matching, true or false, jumbled sentence, calculated and combination. Once the type of question is picked the lecturer must fill in the question text and specify the correct answer.

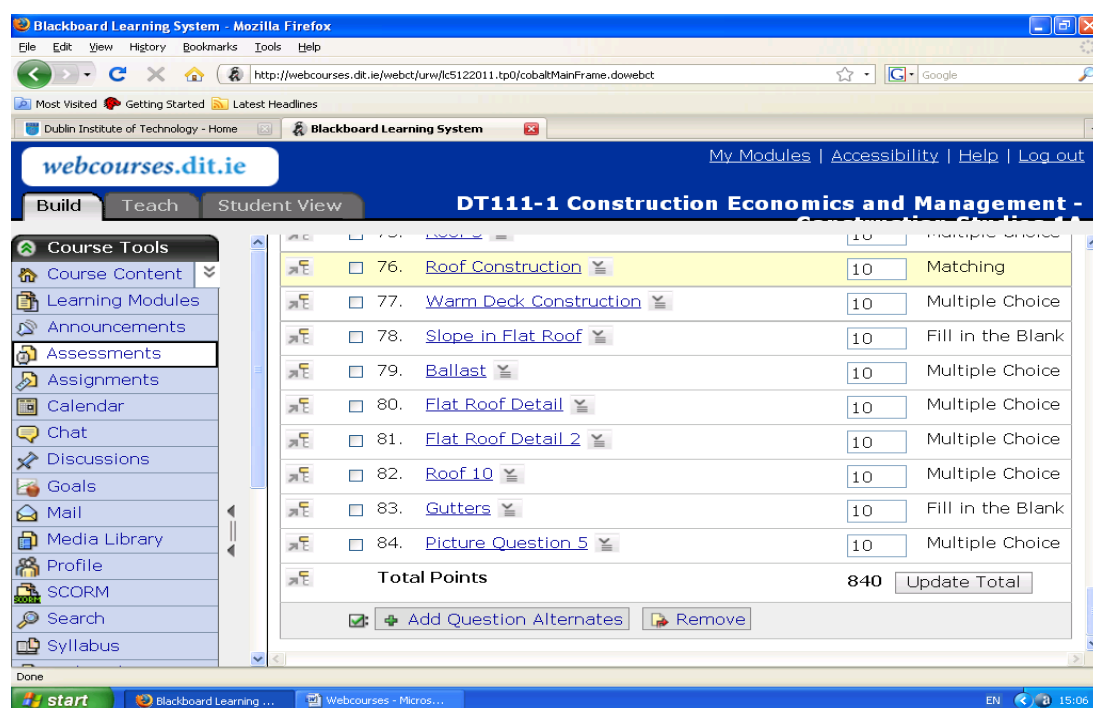


Figure 8. Assessments Course Tool

The author populated the quiz bank in the webcourses module with 84 questions. It was decided that the test would consist of fifty questions and be no more than an hour long. Biggs, J. [2] describes a problem with online quizzes whereby the lecturer needs “to be sure that the person at the keyboard is the student that should be there” at the time they need to be there. To address this issue webcourses has a security function that will only permit students using certain IP addresses to access the quiz and complete the assessment. The IP addresses of twenty five computers in one of the laboratories in the college were inputted into the security settings of the assessments tool. The lecturer was able to release the quiz specifically to these computers when the students were settled at their designated workstations and ready to start their exam. While traditional paper pencil questionnaires can also assesses student’s learning there are benefits to asking students to submit responses electronically, including the immediate tabulation of grades as well as the students receiving their grade immediately [1]. In this instance the students were delighted to get their result instantly after the examination. Many students just after the examination asked the lecturer for a second chance to complete the quiz so that they might improve on their mark. Unfortunately for the student this was an end of semester examination and a second attempt would not be permitted until the supplementary examinations in August and only if the student failed the overall assessment (cumulative grade of both projects and exam). Although the students gave positive comments on the electronic assessment as an end of semester examination, the student’s feedback on their own examinations was limited to the result that popped up on their screen after they completed the quiz.

2.6 Webcourses – other course tools

After using webcourses for over three years the author still does not find that he uses the chat, mail or discussions applications on the tool. Students find it easier to contact the lecturer by e-mailing or calling him in the office. However the lecturer may start encouraging students to use the discussion function of the application to promote peer to peer learning. The chief advantage of this is that discussion and chat is not restricted to a time or place. Students have an opportunity in their own time to present both formal and informal opinions and questions for feedback from their teacher and fellow students [3]. However I am not sure how successful this will be as the students might be reluctant to communicate with each other if they know their lecturer can see the content of their discussions. Toohey, S. [3] stresses this, stating that students could be “*reluctant to expose risky opinions to the scrutiny that a bulletin board allows, unless the system permits anonymity.*”

3 CONCLUSION

As much as the author feels webcourses has helped him in course management and assessment, its best use is not as a substitute to traditional lecturers and tutorials but rather an aid to the student and teacher for effective communication, administration and delivery of the modules. “There are still so many limitations inherent in trying to encompass the interactive stages of learning through mediated systems that it makes more sense to retain the tutorial, the small class the practical or laboratory session where possible” [3, P164]. The author agrees with Toohey, S. [3] but with the introduction of webcourses on his modules he has saved time and resources in administration that now have been imported into teaching practice. To utilise the assessments tool effectively the author intends to split the final exam into a number of assessments at regular intervals throughout the duration of the module. The instructor can also permit the students to carry out the quizzes a limited number of times within a certain time period. This will give the students immediate feedback through the results and also provide them an opportunity improve their grade both on the individual tests and over the duration of the module. The author hopes this could incentivise the students to study throughout the duration of the module delivery rather than just at the end. It is the author’s intention to comment on this process next semester and progress the study further.

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- [2] Biggs, J. (2007). *Teaching for Quality Learning at University*. Berkshire: SRHE & Open University Press.
- [3] Toohey, S. (1999). *Designing Courses for Higher Education*. Buckingham: SRHE & Open University Press.

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