Lend me your ear and I'll improve your grade

Dr Mark Glynn, Institutes of Technology of Ireland (formerly ITT Dublin)
E-mail: mark.glynn@ioti.ie

Institutes of Technology Ireland

ITT DUBLIN
Institute of Technology Tallaght
Institiúid Teicneolaíochta Tamhlacht

1. Introduction

Continuous assessment has become an integral part of higher education.. There have been papers, journals[1], projects[2] and blogs[3] illustrating the importance of assessment as a driving force for learning, assessment & evaluation in Higher Education. In order to optimise any assessment, continuous or otherwise, in terms of a learning experience for the student, feedback is crucial.[4] However, providing feedback on a regular basis to students can dramatically increase the workload of the lecturer. This paper outlines how the use of technology has been used to minimise the workload for the lecturer while providing individual feedback to students on a regular basis.

This research was conducted on a first year chemistry module. This common module was delivered to students from *BSc in Chemistry* and *BSc in Bioanalytical science*. This study was limited to first year full time students, but the methods mentioned in this paper are used to a lesser extent in other courses within the department of science.

Assessment within this module consists of 50% continuous assessment and 50% available in the final exam. The continuous assessment aspect of the module is further sub divided into 35% allocated to ten laboratory sessions and 8% available through a group presentation on a given topic and finally 7% on an in-class exam. This poster concentrates on the assessment of the ten laboratory sessions.

Every assessment was completely managed through the colleges learning management system. The only cost involved was the purchase of a headset and microphone for the lecturer. The research is evaluated by use of student questionnaires and focus groups.

2. Project details

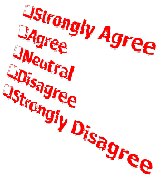
There are over 80 first year chemistry students. Each week a student completes a laboratory practical and an associated assignment. Traditionally this assignment was a laboratory report submitted in a hardback laboratory notebook. This results in a workload in excess of 80 lab books to be corrected on a weekly basis just from one class. In addition the majority of the time in the lab for the lecturer was spent giving feedback to the students on an individual basis on the previous laboratory session.

Consequently postgraduate demonstrators "led" the laboratory practical. This was not an efficient method for either the student or the lecturer in terms of student learning. In the second semester of first year the assessment procedures for the laboratory sessions were revised significantly. The number of reports required were reduced and replaced with computer based tests and worksheets. Part of these revisions included a more prompt individualised feedback for laboratory reports. Students received audio personalised feedback on their laboratory reports distributed via the Learning Management System (Moodle). More generic feedback was also provided in the form of screencasts using Jing™.

Every assessment was completely managed through the colleges learning management system.

3. Student Feedback

At the end of the semester students were invited to a series of focus groups on laboratory assessment. Each group consisted of 4-5 students. Students were then asked , on an informal basis how they found the practical laboratory sessions. Please find below some of the comments that the students had relating to the audio feedback provided for the lab sessions:



" It was a bit weird at first, hearing the lecturer outside the classroom but I now wish other lecturers went to this hassle. Because it was feedback specifically for me instead of the whole class I made sure to change my write-ups for the next lab"

"I actually found myself listening to it (the feedback) on my iPod on the way home on the bus ..... Don't tell the others I said that"

"I preferred face to face feedback but this way we had you (the lecturer) freed up to teach us in the lab instead of the post grads"

4. Software requirements

Recording Audio Files:
Audacity which is Open Source Software (i.e. Free). This software allows the user to record sound files in MP3 format, which creates audio files small in size suitable for use on a students computer or MP3 player e.g. iPods

Screen casts
Audiovisual generic feedback was given to the students for several aspects of the laboratory assessments by using screen capture software freely available JING™. Students also used this software as part of their assessment to submit their group presentation

Learning Management System
Moodle is the learning management system used within the college. All assessments and associated feedback was managed through Moodle

5. Conclusions

As the available technology continues to advance, numerous additional approaches are sure to become available in the future for enhancing the quality of feedback for students. No matter what approach is ultimately selected, an improved educational experience for students will result.

6. Future work

- Provide audio feedback for laboratory reports for every lab session
- Expand the number of worksheets available for each lab and provide screencasts for solutions to these worksheets
- Provide screencasts and video "introductions" to the laboratory sessions
- Provide workshops for academic staff across the college and the Institute of Technology (IOT) sector on effective use of technology for feedback

Acknowledgements & References Aine Allen and Margaret Phelan, ITT Dublin, Richard Thorn, Institutes of Technology of Ireland.

1) http://www.tandf.co.uk/journals/titles/02602938.asp 2) http://www.heacademy.ac.uk/projects/detail/changeacademy/change_academy_glamorgan_2008
3) http://www.articulate.com/rapid-elearning/about-tom/ 4) Race, P (2006) The Lecturer's Toolkit: 3rd Edition London: Routledge