



2011

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Recommended Citation

Lawless, Deirdre and Gordon, Damian, "An Examination of the Use of Blended Learning to Support Improvement of Engagement and Retention of Part-Time Postgraduate Level Students using Student Edited Podcasts" (2011). *Teaching Fellowships*. 8.
<http://arrow.dit.ie/fellow/8>

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9. An Examination of the Use of Blended Learning to Support Improvement of Engagement and Retention of Part-time Postgraduate Level Students using Student Edited Podcasts

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Abstract

Part-time students must contend with a large number of logistical factors which may inhibit their ability to attend all required instruction sessions. The vast majority of part-time students are in full-time employment and due to either family or work pressure may be unable to attend all classes. This can have a significant impact on the student learning experience. Students can quickly fall behind, become de-motivated and can increasingly seek deferrals from either examinations or the programme itself. Given the current economic climate it is to be expected that the numbers of students interested in upskilling will be increased in the short- to medium-term and that the numbers forced to miss instruction sessions due to increased family and work commitments will also increase. This project investigated how a 'Blended Learning' approach, combining traditional and online delivery, and specifically, the use of podcasting could be used to address some of the problems encountered. Some teaching materials and classroom sessions from selected core modules on two M.Sc. programmes in the DIT School of Computing were recorded and made available as podcasts to students. In addition students were encouraged to annotate these podcasts and to develop companion podcasts to support the transfer of knowledge between classmates.

Keywords: Blended Learning, curriculum development, e-learning, Podcasts, student engagement

Outline of Fellowship Project

Introduction

This project investigated how a 'Blended Learning' approach, combining traditional and online delivery, and specifically the use of podcasting, can be used to address some of the problems encountered by part-time students. Teaching material and classroom sessions for selected core modules on two M.Sc. programmes in the School of Computing were recorded and made available as podcasts. Students were encouraged to annotate these podcasts and to develop companion podcasts that support the transfer of knowledge between their classmates and form the basis of a repository accessible to future cohorts.

There are four main objectives of the project:

- To develop, implement, evaluate and document an approach to using student-edited podcasts for part-time postgraduate education in the school of computing as part of a blended learning approach.
- To assess the impact of the use of student-edited podcasts, as part of a blended learning approach, on student engagement and retention in part-time postgraduate education in the school of computing.
- To provide recommendations on how to further develop a blended learning approach for part-time postgraduate education in the school of computing.
- To establish an open, accessible repository of teaching and learning material for use by current and future staff and postgraduate students of the school of computing.

The perceived benefits include:

- The development of a piloted and documented approach to blended learning for part-time postgraduate education in the school of computing.
- A piloted and documented methodology for the creation of podcasts by staff and the creation and annotation of same by students in the school of computing.
- A documented assessment of the impact on the use of student-edited podcasts on student engagement and retention of part-time postgraduate students in the school of computing.
- The establishment of an open, accessible online repository of teaching and learning for selected modules on postgraduate programmes in the school of computing.
- The contribution to the development of a broader blended learning strategy for the school of computing.

Project Evaluation

The evaluation process was undertaken in a multi-stage fashion. The initial evaluation process was to identify the most appropriate software tool to produce podcasts that would allow easy annotations to be added by the students. The second part of the evaluation process was to determine if some types of lessons more naturally lend themselves to podcasts. The final part of the evaluation was to assess the students' use of these podcasts and their contributions to the podcasting process.

There are a range of software tools available to create and publish podcasts, e.g. Audacity, Easy Podcast, ePodcast Creator, Free Podcast Maker, Podcast Accelerator, Podcast AutoCue, Podifier, PodProducer, WebPod Studio, Winpodcast. A range of these tools were reviewed under the following headings: *Ability to Record*, *Ability to Edit*, *Ability to Publish*, *Ease of Use*, and *Help/Support*.

Under these criteria *Audacity* (<http://audacity.sourceforge.net/>) was identified as the most appropriate tool for this research project; as well as being free and easy to use, *Audacity* supports a range of sound cards and channel mixers. At high frequency recording there are little or no latency issues, and a wide range of plugins are available without a fee.

Following this step, a number of lectures from two modules were recorded to determine whether some lessons were more applicable to audio podcasts than others, which was found to be the case. For example, one of the modules recorded concerned the creation of MindMaps; this topic was found to be unsuitable for audio podcasts as the teaching of this topic requires that the students develop a topological appreciation of the relationships between branches in a MindMap. Nonetheless a number of topics were identified which were highly applicable to podcasting, including *Interviews for Quantitative Data Collection and Analysis*, *Surveys for Quantitative Data Collection and Analysis*, *The Case Study Methodology*, *The PMI Lateral Thinking Technique*, *The CAF Lateral Thinking Technique*, *The OPV Lateral Thinking Technique*.

The final stage of evaluation was to assess to students' contributions to and use of the podcasts. It is worth noting at this point that one of the interesting effects of audio recording some of the lectures was that it caused the students to become more silent and less interactive in these sessions; they were nervous and reticent to contribute to group discussions when they knew they were being recorded. And yet when asked to contribute to podcasts individually they were articulate and quite frank about their views. The completed podcasts were made available to the students who praised the additional flexibility that they

provide, and evidence of the effect of these podcasts is becoming apparent in dissertations being submitted by these students.

Proposed Future Work

This project will continue on in a number of ways in the coming academic year, and in particular, the development of podcasts to support the induction process will be created. Based on the key theme of this research – that sometimes part-time students cannot be available to classes – induction is equally applicable to this situation, whereby part-time students just cannot make it in for induction, or can only attend part of the induction process.

Thus a number of new podcasts for the induction process will be developed:

- A virtual tour of the Kevin Street building, highlighting the key areas (lecture rooms, computer labs, School office, etc.), and we will encourage students to add to this with their own insights and humorous comments.
- Using electronic resources in the DIT and interacting with the technical staff.
- Using the library resources available to their fullest extent.
- Understanding rights and responsibilities as a student in the DIT.

These podcasts along with domain specific topics will continued to be developed to address the needs of the student both in general and from the topic specific material perspectives.