Student experience of open educational resources in large classes

Institution & Institutional Context

The University of Technology Sydney (UTS) has a range of classes that are classified as large in terms of the number of students they need to accommodate. While the student experience of a large class will differ depending on their discipline, as a general rule a large class is any UTS subject with enrolments greater than 250 students. A third of all UTS students are enrolled in one or more large class. More than two thirds of these classes are in the Faculties of Business and Science, and when Arts and Social Sciences, and Health are included, together then subjects account for 90% of the large classes in the university.

Keywords and OEP themes

Video-based learning; freely available educational resources; large classes.

What is the case study about?

Learning within large classes can provide a distinctive student experience when the subjects in this case study make use of additional video-based resource materials to support student learning. At a minimum these classes have lectures recorded and made available to students in the university learning management system. It is also common for lecturers to present relevant video examples of content, either available through the library or from other online sources, during their lectures.

These resources are not purposefully created for the subject and would be considered supplementary to the primary content presented in the lecture. Lecturers in these subjects acknowledge that there are many other types of resources available for students (freely accessible from TedX, Khan Academy, iTunesU and YouTube) but are of the view that they do not have as close an alignment to the subject aims as their own material.

For this reason, some lecturers create additional video material to support their large classes. The most common reason given for creating video material is as a replacement for some or all of the lectures. This may be because the number of timetabled lecture hours was reduced and they feared that important content would be missed without the additional video material. In some cases the recorded

material provided the main content for the class which would be offered using flipped learning approaches for greater student engagement with the content. In other cases the video material was created to expand the student experience beyond the traditional lecture, either by introducing the subject to the students, providing additional information in response to current events or student questions, presenting Information in alternative formats such as animated videos to assist student understanding or as additional videos relating to the assignments.

More than half the lecturers in large classes at UTS do not create any additional materials beyond the lecture recordings. The major reason given was a lack of time. Some lecturers say that they do not know how to create video resources but the most common reason reported was that additional resources were not considered to be necessary. The lecture material provided was considered sufficient for the learning of the students. Some lecturers thought additional material was not needed because it is not as interactive as their current lectures.

This view was not shared by students however, who see value in using freely available educational resources. In previous surveys of UTS students' use of educational technologies, 45% reported using freely available educational resources one or more times a day, particularly as part of a course. Students reported a preference for more than doubling the level of access to digitized, multimedia materials— specifically library resources, lecturer-generated materials plus more use of free education

resources like TedX, Khan Academy, iTunesU and YouTube.

Why is the initiative being introduced?

This case study explores the informal learning strategies adopted by students who rely on OERs to fill a gap in their understanding of the subject matter presented in large classes. Students in large classes sometimes face the particular challenge of a less personalised learning experience. For lecturers, large classes can carry a significant administrative overhead, resulting in less time available to engage with individual students.

Students report that they are often unable to talk to lecturers individually to receive individualised advice and guidance. There are generally lower levels of student participation in lectures than in smaller group settings like tutorials, which creates fewer opportunities for students to engage with the subject matter presented in lectures. Also there is unlikely to be an immediate application of what was covered in lectures which lowers the retention of material.

Surveys of students in large classes show that they find their own strategies for addressing gaps in their knowledge. Opportunities to access video recording and viewing has never been greater with many topics taught in university now readily available online in sites like TedX, Khan Academy, iTunesU and YouTube. This ever-widening access to video-based OERs and the ready availability of mobile viewing capabilities provides students with alternatives to the formal resources provided for their courses. As a result a

back channel of OER use emerges in large classes. It is this back channel that provides the personalised learning experience for students in large classes.

How was the initiative implemented?

This case study is based on 452 student responses to an online questionnaire. The questionnaire was designed to provide a fine-grained understanding of the extent to which students used OERs in their large classes. Students enrolled in one or more of the largest classes taught at the university were invited to participate in the survey. The survey asked students about the experiences of using video-based learning materials. This included recorded lectures and their use of OERs.

The survey collected both quantitative and qualitative data. The quantitative items were a series of statements about the extent to which students used video resources. The qualitative comments asked students to explain their choices.

The quantitative items were analysed using descriptive statistics and compared with the university population as a whole. This revealed that the survey respondents represented a higher proportion of Engineering and IT students and correspondingly fewer Business and Design students than would be expected given the enrolment in the subjects being offered. As might be expected with mainly first year or second year students responding, there was a higher proportion of young, female respondents compared to the overall UTS student population. Having half the comparative proportion of international students may have been an effect created by the profile of the faculties represented in the sample. This would also account for the majority of respondents being in some form of paid work with the largest group working between 11 and 20 hours per week. Some students indicated they were in full time work. On average students travelled 108 minutes to and from university for their classes with the shortest journey being 10 minutes and the longest 8 hours. While the vast majority of respondents were largely comfortable with digital video technology, 21 per cent were very uncomfortable with using this kind technology for their studies.

That group was clearly in the minority with students making extensive use of freely available educational resources related to their subjects. Examples provided were TedX, Khan Academy, and YouTube. Only 18% of students had never viewed freely available educational resources during the semester. The largest group viewed them a few times a semester or a few times a month although a significant group of students were looking at freely available educational resources each week (17%) an experience that could be compared to attending lectures.

Issues & challenges

The qualitative responses were analysed to identify overarching common themes and patterns. This revealed the following themes.

Digital video affected students' experience of large subjects through their ability to be viewed at the student's own pace. Students used this material to make up for missed material, either because they missed the lecture or attending the lecture and missing that part of the presentation. They were also used in preparation for the exams or to improve understanding of key concepts of the subject.

The most common reason provided for viewing freely available educational resources was for help in understanding the subject material. The second most common reason was getting another perspective, and seeing practical examples of concepts presented in class. Some students were assigned viewing of freely available educational resources outside of class, either as supplemental material or as homework.

Some students found that viewing freely available educational resources provided a clearer explanation that was easier to understand compared with what they had received in class. This was because they provided more detail than the class presentations and provided further explanations of the topics.

Other reasons for viewing freely available educational resources related to alternatives to ideas presented in class, whether for background information, to get a better context, fill in few gaps in learning or just for personal interest.

Two key issues emerged. Firstly, the students identified a lack of fit between online materials and the aims of the subjects.

There are a wide variety of resources available online and informal learning strategies are not always the most effective way of learning particularly when the resources students are studying are irrelevant or misleading with regards to the subject outcomes.

Secondly, students valued the clarity of the presentation or the alternative perspectives presented in the OERs. Lecture recordings provide an accurate record of what was presented in class and this was a measure of relevance rather than quality. Students preferred to view freely available education resources because they preferred the structure of the information or the style of the presenter.

Looking to the future

Freely available video based content development is changing the nature of access to education. There is an abundance of free educational resources and this provides a point of comparison for the students' lectures. Students in large classes are looking to address convenience, mobility and ease of use when it comes to accessing freely available educational resources. It is therefore likely that the use of freely available education resources is linked to a significant shift to mobile technology that now accompanies the almost universal access to a home computer. Surveys of student use of technology show that more than three-quarters of participants have access to a smartphone, with the under-30 age group having more access than those above 30. Over a third of UTS students report using their smartphones regularly in their coursework and more that half as many again wanted to use smartphones more regularly in their classes. Added to this the access to tablets on campus now being equal to laptop use the demand for mobile access to supplementary video material can only increase. This is likely to have a significant impact on the way lectures are delivered in the near future.

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