

OFF-CAMPUS LEARNING: WHAT DO STUDENTS WANT?

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ABSTRACT

As universities attempt to increase enrolments of 'time-poor' students, effective teaching strategies that minimise attendance requirements are required. The increasing use of technology to record face-to-face lectures provides a useful alternative for students unable to attend. However, this study indicates that recorded lectures, alone, are inadequate for distant students, who make extensive use of a wide range of materials. Study guides remain the most highly valued and highly used items in the suite of materials available to off-campus students. The importance of contact between off-campus students, their lecturers and their peers is highlighted.

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BACKGROUND

In the current social and political climate, universities are attempting to increase their engagement with groups traditionally under-represented in tertiary education. Populations targeted include individuals from low SES backgrounds, including those from regional and remote communities; individuals with disabilities; and those seeking to upgrade qualifications to increase career prospects. Many within these groups have difficulty finding time to meet on-campus attendance requirements due to a combination of geographic, economic and personal factors. This highlights the need for flexible teaching strategies and has rekindled interest in off-campus learning systems.

In Australian universities, it is common for units to be taught simultaneously in on- and off-campus modes. Traditionally, print based materials were used to substitute for lectures for off-campus students; these materials have also proved useful for on-campus students in a variety of settings (Roberts, 1998). Much of this print material is now supplied in on-line format, however many students prefer hard copy materials and will download and print these materials (Roy & Potter, 2007).

More recently, the combination of PowerPoint presentations and audio-capture technologies have been used to provide off-campus students with an experience akin to the lecture. Academics support the use of web-based lecture technologies for off-campus students (Woo, Gosper, McNeill, Preston, Green, & Phillips, 2008) which may help to address the perceived inequality between on- and off-campus students (Luck, 2009). Have we now gone full-circle? Are ancillary materials no longer necessary?

A number of studies have examined the effects of provision of face-to-face lectures, recorded lectures (both audio and video) and detailed written materials including lecture notes, study guides and texts, on student performance (Vandehey, Marsh, & Diekhoff, 2005), student satisfaction (Grabe & Christoperson, 2007; Palmer & Holt, 2008) and attendance (Vandehey et al., 2005). However, few studies have asked students how **they** use and value these resources. The aim of this study was to explore the ways that off-campus students enrolled at Monash University Gippsland campus use the range of resources available and to determine the combination of materials required to meet their needs.

DESIGN AND PROCEDURE

PARTICIPANTS AND RECRUITMENT

This study involved off-campus students enrolled in two subjects offered by the School of Applied Sciences and Engineering at Monash University's Gippsland campus during semester 2, 2010: first year biology and second year biochemistry. Off-campus students enrolled in these subjects were provided with a variety of materials including written materials (detailed study guides, copies of lecture

slides and texts) and on-line materials (recorded lectures and online discussion forums). Off campus students are permitted to attend lectures if their location and circumstances allow, however none of the students in this cohort were able to attend lectures. In these two units, lectures were presented using CP3 software, which allows the lecturer to annotate and make explanatory sketches on slides during the lecture. Lectures were captured using EchoSystem technology, which provides the student with a package comprised of the audio of the lecturer's voice and video of the slides, including annotations. Lecture recordings were available for download from two hours after the completion of the face-to-face lecture. Different approaches are used for the laboratory component of these two units: first year biology students complete their practical work off-campus, using portable experimental kits, while practical exercises for second year biochemistry students are conducted during a compulsory four day residential program (Mosse & Wright, 2010).

In total, 62 off-campus students were invited to take part in the survey, 23 students (8 males and 15 females) responded. The surveyed students ranged widely in age with 9 students under 22 years, 5 between 23 and 30 years, and 9 students who were over 30 years of age. Twelve off-campus students attended a focus group interview.

SURVEY

Students enrolled in the two subjects of interest were contacted by email and invited to complete an anonymous survey via SurveyMonkey regarding their use of support materials in all of their off-campus classes. The survey focussed on student behaviour (how often do you...) and student values (how useful do you find...). A Likert scale was used for the questions, shown in Table 1, and additional comments were invited from students.

Table 1: Questions posed in a survey of off campus students regarding their use of teaching materials

1	Study Mode
2	Age
3	Sex
4	How often do you ... (always / usually / sometimes / hardly ever or never / NA) Attend face to face lectures Listen or watch recorded lectures Read the study guide Read the text book/recommended readings Discuss the unit content with others Access additional learning resources available on Blackboard Ask questions during lectures
5	How useful do you find the following (extremely useful / useful / of some use / of little use / not useful / NA) Face to face lectures Recorded lectures The study guide The text book/recommended readings Discussing unit content with others Additional learning resources available on Blackboard Asking questions during lectures

INTERVIEWS

A semi-structured focus group discussion was held with 12 off-campus students from the second year biochemistry class over lunch, during their residential school, with three members of the teaching staff from the school. The discussion was informal and led by a staff member who did not teach this group of students. The lecturer was present and contributed to the discussions, which were audio-taped and transcribed with the permission of the students.

The aim of the discussion was to ask students about how they used the study materials available to them as off-campus students. The conversation flowed organically with all three lecturers asking probing questions to explore and clarify issues raised by the participants. The main topics for discussion included how, and how often, students use various learning and teaching materials.

RESULTS & DISCUSSION

Student responses to the survey were examined to determine their behaviours and values in regard to the materials provided (Table 2) and correlations between students' values and their actions identified.

The most useful resources identified by off-campus students were the study guides, texts, recorded lectures and additional resources provided via the on-line learning system. All were rated as useful or extremely useful by at least 78% of the students surveyed. In general, this correlates well with patterns of use identified by the students; the resources most used by off-campus students are the recorded lectures, study guides and text. It is interesting that 26% of off-campus students identified face-to-face lectures as extremely useful or useful, even though they hardly ever or never attend lectures. Comments made during the discussions indicated that students felt that face-to-face attendance at a lecture would be better than listening or watching online. Similarly, 22% thought that asking questions and having discussion with others was extremely useful or useful, but rarely took part in those activities. It is also interesting to note that a high proportion of off-campus students identified 'asking questions' as 'not applicable' (Table 2) when this opportunity was in fact available to these students via Monash's on-line learning environment (Blackboard), implying that they do not think of the online discussion environment in the same way that they think about questions/answers and discussion in the classroom.

Table 2: Results of survey of off campus students regarding their use of teaching materials. Values given are percentages of all student responses.

Material	How useful do you find ...				How often do you use ...			
	Extremely useful/ useful (%)	Of some use (%)	Of little use/not useful (%)	N/A (%)	Always/ usually (%)	Sometimes (%)	Hardly ever/ never (%)	N/A (%)
Face to face lectures	26			74			39	61
Recorded lectures	83	9		9	87		13	
Study guide	100				91		9	
Text	91	9			74	22	4	
Discussion with others	35	22	13%	30	4	35	61	
Additional resources	78	17		4	57	35	9	
Asking questions	22			78			17	83

While all students appreciated access to the full range of materials, their preferences and usage patterns were highly individual.

Student comments indicated that they used study materials in a variety of different settings, often combining their study with other activities:

...sitting on the computer at home, home from work, have tea, sitting in front of the computer is like sitting in the lecture...if you've got it recorded, you want to listen to something 3 or 4 times you can go back till you get it and then move on.

...if I get time in my lunch break and whatever at work, I might read the study guide.

I also download (lectures) to my ipod...I usually try to exercise a few times a week so I can listen to them then...

The focus group discussion revealed that students can be divided into two (approximately equal) groups according to whether they use study guides and texts, or recorded lectures, as their primary source of information. Students who begin by reading study guides and text books typically use lecture slides and recordings to fine tune and revise. They seem to be highly organised, with a fairly linear approach to their study.

...I'll make notes or rewrite the study guide my way...three weeks or four weeks before (the exam) I started listen to the lectures just to go over it and I had the lecture slides there as well, so I was able to go back and think oh yeah I've looked at this in the study guide and I know what's coming and increase my understanding that way.

I try and use the textbook and read the sections that you tell me to. I try to make notes on all of them but then I end up with pages and pages of notes not really knowing exactly what I need to focus on...and of course I use the study guide as well...I haven't looked at the visual but I definitely download all the lectures and the talking [audio] and I have the powerpoint in front of me and I try to follow it and make notes as you talk about it and things like that...

Off-campus students enjoy the ability to stop, start and replay recorded lectures. Interestingly, students who begin with lecture slides and recordings also read study guides, but are less likely to read the textbook. This group of students recognised a lack of organisation or motivation in their own approaches to study, and used the lectures to provide a framework and/ or extrinsic motivation for their learning:

I couldn't sit and read the study guide and make notes from it 'cos I would just be daydreaming and thinking about other things, I basically only use the lecture notes and the visual just because it keeps me stimulated...I try and watch it and listen to it the first time and then go back and listen to it again...I'm not going to be concentrating entirely for the two hours so when I go back I will pick up things I would have missed the first time. So I tend not to use the textbook very much unless I'm looking for a definition...and the study guide not at all yet...

I listen to the lectures and jot down bits and pieces but then I go back over the study guide and look at the set reading and try to read through and write as many notes as I can...with the textbook I've been a little bit slacker with that...

I listen to lectures I find them really interesting and I kind of wrap my head around it all so then when I read the study guide, I feel like it just kinds of sets in...so I stop and start it a lot and write a lot of notes down...I prefer to listen to lectures on line than actually going to lectures...If I don't hear something right I can listen to it again, if I didn't have time to write down something I thought was really important I've got time to write it, yeah I really like lectures on line

In particular, students appreciate the interactive nature of CP3 technology, which gives them the ability to 'watch' diagrams being created as they hear the accompanying audio:

Yes before I could still follow the slides and listen to the audio and still have a good idea of what you are talking about. When you say 'here' and 'there' I have a pretty good idea of where you are pointing to. Now having it together I can see what you're drawing and what you are actually talking about

I think the fact that you are able to do it and talk about it at the same time means it doesn't have to be a great picture...even if it looks like 'mush' I know what you're talking about..."

On-line lectures do not meet the needs of students who do not have regular study time available and may be working ahead of the on-campus class schedule. One student claimed not to use the audio recordings at all for currently enrolled units, but planned to access recorded lectures to prepare for a unit he intended to study the next year:

I don't listen to lectures at all, I start with study guides and the textbook and I will go through and make notes from the study guide...then I will look at the slides and see if there is anything that the lecturers have put in which isn't in the study guide...though I must admit I have now downloaded (another unit) and I'll listen to those over Christmas, because I will be doing (that unit) next.

While students greatly appreciated on-line lectures, it became apparent during the discussion that off-campus students do not see these as equivalent to face-face lectures and felt disadvantaged by the lack of opportunity to talk with lecturers and fellow students:

If I attended face-face lectures, the benefit of being able to pose questions to the lecturer would be great.

I would like to discuss the unit content with others which is why I find the (residential) schools very useful.

I'm off-campus - I miss not being able to ask questions of the lecturer as I think of them while I am listening to the lecture. Anything not covered though I can usually find via Blackboard discussions.

Each unit has an on-line discussion forum, available via Blackboard, but this clearly is not meeting the students' desire for interaction. While students indicated that they logged on 'daily' or 'a few times a week', the few students who were prepared to initiate conversation were disappointed by the lack of response:

... at the start I was, like, the only biochemistry person, is there anyone out there?

... (it's) very quiet, (a student) keeps trying but no one wants to talk to him

Nobody wants to talk to me

Online discussion groups are more active after students 'get to know' one another, pointing to the importance of establishing face to face peer relationships before relying on online discussions as a substitute for class interaction. For example, off-campus biochemistry students were confident that, after meeting at the residential school, discussion would take off as it had in previous units:

I think we were all on (Blackboard) daily after (the residential school)

Sometimes I posted the questions and someone goes oh yeah I've got the same problem...if I have a question it goes on the web

Off-campus students wanted the freedom to choose resources appropriate to their own learning style, and an experience equivalent to that of on-campus students. This is highlighted in the following comment from a student who did not use recorded lectures, but still emphasises that they are an important part of the package:

...when I shifted across to (Monash) it was just wonderful everything was there. It didn't matter if you were an on-campus student or an off-campus student, you had access to all the same materials. So I think the spread of material you got enabled you to do exactly what you need to do, which is those who learn doing the lectures can do the lectures (and obviously they've been improved with Echo) and those who study the way I do, can do, because they've got well written study guides and the textbook is reasonably good...you cover the lot.

CONCLUSION

Off-campus students make extensive use of the range of resources available to them, valuing and using recorded lectures, print-based study guides and their texts in combination, and using these more than other learning resources. They select combinations of resources that suit their learning styles and lifestyles, with some drawing on the recorded lectures to provide extrinsic motivation and/or a learning framework as well as content, and others relying more heavily on printed materials and a more self-directed approach. While off-campus students appreciate the opportunity to pause and rewind the recorded lecture for better understanding, they report that recorded lectures complement, but do not replace, traditional study guides. Off-campus students are no different from their on-campus peers, whose preferred instructional delivery mode is also one in which the "whole package" of face-to-face lectures with video recordings of the lectures along with uploaded course documents is made available, giving the students the choice to use these resources as they prefer (Soong, Chan, Cheers, & Hu, 2006).

Off-campus students are not happy to work in isolation and want contact with lecturers and fellow students, which can be achieved by on-line discussion forums. However our students indicate an initial reluctance to post themselves, although all were keen to read the postings of others. The facilitation of on-line discussion forums is an art, rather than a science, yet skilful intervention has been shown to promote active participation and to facilitate learning (Mazzolini & Maddison, 2003). This emphasises an important role for the lecturer in actively nurturing the development of on-line communication between off-campus students to provide a vibrant learning experience.

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