

# Supporting Lecturers In Their Move Toward A New Learning Environment

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## ABSTRACT

At the University of the South Pacific, video broadcast courses, which integrate face-to-face and distance teaching, are proving useful as a means of scaffolding the transition of lecturers from a conventional teaching learning environment towards new ways of teaching that emphasise interaction rather than content delivery. By providing ample support in a professional environment that uses technology to both replicate and supplement the traditional teaching roles, lecturers are allowed a “safe zone” in which to generate new skills while maintaining lecturer comfort.

## INTRODUCTION

The University of the South Pacific was specifically created to meet the unique education and development needs of its 12 member countries: the Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Samoa, Tonga, Tokelau, Tuvalu and Vanuatu. In some member countries, USP is the only option for higher education. USP serves a region characterised by large expanses of ocean, small isolated populations of great linguistic diversity, and often impoverished economies. The main campus is located in Fiji, with secondary campuses in Samoa and Vanuatu, and full-service centres in all member countries. Enrolment topped 18,700 students in Semester 1, 2004.

Until recently, USP has been a dual-mode university, dividing its courses into on-campus and distance modes. On-campus students study in a learning environment dominated by lectures and large tutorials. Distance students, who make up approximately 60 percent of total enrolments, mostly study through self-contained print packages sometimes supplemented with audio or video tapes or occasionally with interactive audio or video tutorials.

One troublesome aspect of USP's traditional distance education process has been the limited interaction between students and their lecturers and, to a lesser extent, amongst students themselves. Currently, the student-learning environment is focused on the passive activities of listening and reading. Interaction with lecturers is often limited to notes written on assignments or comments given during an audio conference. Understandably, distance students often become demoralised, the failure rate is worrisome, and lecturers are left questioning the quality of the learning that does occur.

While on-campus students fare better because they have immediate access to teaching staff and other resources (such as larger libraries and more computer labs), complaints about difficulties in understanding lecturers with strong accents and overcrowded theatres are common. Even interaction within tutorials is limited, as cultural rules governing how different groups communicate with each other leaves some students unable to articulate their growing understanding even when they are willing and able.

With such an emphasis on passive lectures and reading material, many students find it hard to progress beyond surface learning, a point confirmed by qualitative studies conducted with distance students (Landbeck & Mugler, 2000). The authors note: "A deep understanding of a subject, rather than the ability to reproduce knowledge mechanically, is or should be a goal for students anywhere, including the South Pacific, if they are to contribute usefully and creatively to the development of their countries and of themselves."

After four years of restructuring, the university has transformed itself into a multimodal institution. Management continues to push staff to critically assess traditional teaching methods. In the words of Acting Vice Chancellor Rajesh Chandra:

"To realise true economies of scale and benefits of good practice, it is imperative that the perspective of what constitutes classroom teaching move from the idea of conventional lectures focused on giving out information to one based on the facilitation of learning." (Chandra, 2004)

This reflects global trends in higher education. Laurillard (2002) states that new methods and media must be introduced to allow students time to take part in more active forms of learning such as "discussing", "practicing" and "articulating", rather than just merely "attending" to course content. It is only when a more effective balance between these four kinds of activities is achieved that student learning can be optimised.

Changing classroom practice is “an evolutionary process involving small increments of change rather than large ones” (Farrell, 2004). For teachers to change their practices, they first need to gain confidence using new tools and teaching methods. For some, this will initially mean using technology to replicate their face-to-face classrooms. But with time, experience and support, teachers can see how new learning environments can be created to enhance student learning.

As in many universities, we are finding that change does not come automatically, especially when lecturers are comfortable within their current teaching environment. The conventional method of lecturing is deeply engrained, both within teaching staff and amongst students who know of no other alternative in a region heavily influenced by colonial teaching styles of a century ago.

Stepping into a new paradigm presents unique challenges for USP. How can we move beyond the rhetoric of university change in an environment of political and economic instability, in an institution plagued with staffing and resource shortages where staff and students are very comfortable with conventional teaching styles?

## **RETHINKING TEACHING USING VIDEO COURSES**

Early attempts to use technology to overcome geographical disadvantages resulted in the establishment of USPNet in 1972, first as a high-frequency radio system and now a VSAT satellite system. In 2000, USPNet was significantly upgraded. It now links all campuses and centres through both interactive and asynchronous audio and video conferencing/broadcast, online material, data transmission (e-mail, discussion boards, administrative record transferal, etc), and telephony/fax.

Unfortunately, political instability is a characteristic of the South Pacific region. Six weeks after the launching of the USPNet upgrade, Fiji experienced a political coup and most USP member countries called their students home to safety. Semester 1 was curtailed, and University officials faced a quandary over whether to cancel or continue with Semester 2. Opinions were strongly divided, but in the end University management decided to conduct the semester with 32 degree-bearing courses to be delivered by USPNet video broadcast to regional students in their home countries. Teaching staff complained loudly, saying they were unprepared to handle the new USPNet technology. But protests died down as the semester progressed.

Once the political crisis passed, interest in using the new USPNet declined. Part of this was due to staff being intimidated by the technology. Some of the resistance was politically motivated as some teaching staff resented the perceived “forced march” to use USPNet before they felt comfortable with it. But most important was the coup’s negative impact on USP’s staffing situation. Staff resigned in significant numbers, resulting in larger teaching and administrative loads for the remaining staff. Class sizes grew as the job market contracted. This trend remains today. In Semester 1, 2004, enrollment jumped 18 percent over the previous semester. The student demand for more distance course offerings is strong.

Since then, other factors have added to faculty resistance. Incomplete computer literacy, difficulties accessing ICT resources, and a lack of support for the design, development, maintenance and use of ICT resources are all serious issues. There is also a concern that the use of technology in education is not culturally appropriate, with Pacific Islanders preferring face-to-face instruction over technology-mediated modes of learning.

In the semesters since the political crisis, USP has reflected on its current situation. The new USPNet is proving to be stable, student enrolment is growing rapidly, and the demand for distance courses is extremely high yet staffing shortages still mean that it takes about two years to create a quality self-contained distance course. The university community realised it needed a quicker way to deliver the content now presented in face-to-face classes to regional students. Despite the lingering resentment over the way the coup-emergency broadcast lectures were forced upon them, the idea of a video-based course (VBC) was born.

As a teaching mode, VBCs have a 35-year history in more developed regions of the world, but for the South Pacific—where many countries still do not enjoy broadcast television service—the technology is refreshingly new.

Initially, many lecturers viewed VBCs as easy work where face-to-face lectures would be merely video-taped and rebroadcast to a regional audience over USPNet. Hence, many lecturers replicated the face-to-face classroom experience. Many were relieved with the perceived ease of VBCs since chronic staff shortages leave most lecturers with little time to develop the more conventional print-based distance-learning packages. By using the broadcast option, students can complete most of their studies in their home countries, dramatically reducing the cost of their education.

Of the 250 courses offered through flexible learning every year, 23 (9 percent) are now offered as VBCs. Courses are selected based upon student demand and

the need for the course to complete a full degree. In this mode of learning, both on-campus and regional students are part of the same class; the on-campus students experience face-to-face lectures in the main classroom, while students in other classrooms across the region watch a live broadcast of the lecture over the USPNet satellite system. Regional students can request a rebroadcast of the lecture (captured on video tape); similarly, on-campus students can watch a videotape of the lecture stored in the USP Library.

The early VBCs had many limitations, which seem to highlight the inadequacies of the face-to-face lecture. Learning was still concentrated on “attending” activities and a “successful” video class often challenged a lecturer’s proficiency with PowerPoint and general presentation style. The VBCs still suffered from inadequate interaction between the lecturer and her students and amongst the students themselves. Nearly everyone at USP agrees that broadcast lectures fail to maximise the teaching potential of the video medium.

The VBC option does offer two benefits: it allows lecturers a quick means of making face-to-face courses available to regional students, and it provides a comfortable and supported environment in which lecturers can be safely introduced to various teaching technologies.

The main difference between later VBCs and the original “coup emergency” counterparts is that VBCs are now supplemented with more support options. These include:

- **Audio conferencing:** Distance education at USP has long contained audio-support material, usually in the form of dispatched audio tapes, interactive audio conferences broadcast via USPNet, or more recently audio streamed lectures and tutorials accessed through WebCT. During audio conferences, lecturers can also send a computer signal attached to the audio signal. This enables lecturers to interactively talk with students at some or all of the regional centres as well as show visuals through the computer or electronic whiteboard.
- **Video conferencing:** Fully interactive video conferences offer lecturers more tools, such as the displaying of Internet web sites, the transmission of computer screen images (useful for Computing Science courses), and the use electronic document cameras for the display of maps, photos and other visuals. Unfortunately only two centres at one time can be reached during a video conference.
- **WebCT:** In 2001, the University began experimenting with WebCT (a learning-management software package) specifically as a way to

augment the VBCs. Popular WebCT options include discussion boards, e-mail, assignment upload and, to a lesser extent, chat sessions.

Unexpectedly it was the melding of VBCs with these support options that held the answer to both of USP's pressing questions: how to assist lecturers in their transition from conventional lecturing to a more interactive teaching approach, and how to reach our students more quickly. But the journey to transformation was not an easy one.

Lecturers are encouraged to "trial" these new forms of media and the different roles they can play in their teaching, while maintaining the "comfort" of the lecture-style delivery. This provides them with a safe opportunity to gain hands-on experience and confidence in these new media before moving on to examine more fundamental questions about their own teaching methods and the new opportunities that technology offers. As they see the capabilities of the other technologies, and learn about and experience the types of teaching they can support, they are more inclined to emphasise the interactive components of their course and reduce the broadcast component.

## **SCAFFOLDING CHANGE**

The Distance and Flexible Learning Support Centre (DFLSC) is the coordinating body for distance education at USP. An educational technologist is assigned to each course, providing instructional design advice and training (particularly in WebCT) to the lecturer throughout the semester. This support can be quite extensive in the beginning but it is intended to taper off as lecturers gain competency and can assume management of the technology by themselves.

We find that VBC lecturers generally pass through three stages.

### **Stage 1**

In the first stage, the lecturer is mostly teaching face-to-face using the traditional lecture/tutorial scenario. Student time is spent mostly in "attending" activities. Practice is limited to assessment activities, often essay writing. Two areas where lecturers typically need to develop skills are in new teaching methods that support a more balanced approach between attending and more active learning, and in the use of technologies that can support such methods. The lecture can be supported in a number of ways, including audio and video conferencing, print, discussion boards, chat rooms, remote tutoring and, more

recently, audio streaming.

Stage 1 contains a high level of support from DFLSC staff who provide a number of services, mostly in the construction and maintenance of WebCT features such as discussion boards.

The use of WebCT has been taken on with varying degrees of enthusiasm. One lecturer initially refused to use it at all, while others have explored all the tools and have asked for more. Here are some common examples of the practice in action:

In 2003, a new sociology lecturer joined USP and began creating a VBC course on migration issues from his expert, but non-localised, knowledge. Each lecture was followed by considerable student discussion within WebCT where the students were able to articulate their own developing understanding of migration issues. The lecturer then used this input to identify gaps in the students' understanding of the issues and crafted his subsequent lectures to fill the gaps. This reactive mid-course correction—where the lecturer can skillfully adjust course content to meet changing student needs—would be impossible in one of USP's traditional distance-course print packages.

The South Pacific is home to more than one third of all languages spoken today, hence, student interest in linguistics and language is strong. In the past semester, a first-time VBC lecturer overcame her early hesitation about technology in general and created a WebCT site rich in online resources for her regional students. This work included many links to international web sites with the understanding that her students would access these sites to both practice and assess what they learned in her lectures. The WebCT site will be used next semester for on-campus students.

One of USP's most respected lecturers has more than 25 years of traditional classroom teaching experience. His field of expertise is education leadership, particular in primary and secondary education. Initially, this lecturer was timid about adopting new technology as part of his teaching practice, even though he had participated in the coup-emergency broadcast semester. During this lecturer's first few VBCs, an educational technologist even monitored the WebCT discussion boards for him, forwarding via e-mail some of the more exemplary student postings. The students were typically mid-career professionals and their online discussions were often poignant. The passion of the student-to-student discussions intrigued the lecturer and motivated him to overcome his hesitation about the technology and ponder new ways to foster even deeper student dialogue.

Today, four years later, he conducts three under-graduate VBCs and two post-graduate courses via interactive video conference. He designs and maintains the WebCT sites for his five courses. He is particularly enthusiastic about discussion boards. He heavily uses interactive video and audio tutorials. The road of evolution was not an easy one for him personally, but his desire to deepen the learning experiences for his students motivated him beyond his traditional comfort zone. He recently received USP's top award for distance teaching.

As could be expected, computing science lecturers are very comfortable with educational technology and tend to be early innovators. This department has borne the brunt of coup-spawn factors. Student numbers are at an all-time high (about 10 percent of USP's total enrolment), demand for distance courses is extremely high, other non-regional educational providers are beginning to make inroads into USP's traditional enrolment area, and staffing problems are, at times, quite dire.

In early VBCs, this department's teaching staff began by replicating the traditional classroom lecture only to find that the broadcast quality of the VBCs was inadequate if lecturers wanted to continue writing computer code live on the computer monitor for students to see. Several department lecturers pressed the university Information Technology Services (ITS) staff to improve the quality of the broadcast signal, necessitating the purchase of high-end signal converters. To check if the new equipment was working as planned, one lecturer bravely organized interactive video-conference tutorials with each regional group of students, often resulting in lengthy discussions with more than 12 separate groups of 40 or more students. He continued the video-conference tutorials for the remainder of the semester.

In another example, when a remote tutor could not be found in one USP member country and the distance student faced near certain failure in the course without one, one lecturer re-configured the technology so he and the distance student could interact in real-time, each following the other's programming activities on the computer monitor while they talked over the audio channel of USPNet. The extra effort allowed the distance student to complete the course, but all parties were frustrated by the slow bandwidth inherent in the existing USPNet system.

## **Stage 2**

In subsequent offerings of their VBCs, lecturers begin to feel much more comfortable with the technologies, and more attention can be focused on the students' learning experience. In Stage 2, lecturers start to evolve their teaching

practices and explore new ways of redistributing student learning time towards more active forms of learning. Often, the value of the broadcast lecture itself is called into question as lecturers begin to appreciate the deeper learning achieved through more non-traditional learning methods, such as discussion boards.

In computing science, the department's teaching has evolved from broadcasts of programming demonstrations by the lecturer to students now writing their own programs, then posting these programs on WebCT so their classmate can critique them through discussion board postings. Here, students are moving far beyond attending learning activities into highly participatory peer-teaching roles.

In a second sociology course, a seasoned VBC lecturer struggled to find ways to serve an international student living beyond the reach of the USPNet satellite signal who needed this last course to complete her degree. Here, the audio portion of the classroom lectures was captured from the videotape recording, digitised and "streamed" via the Internet to the international student. Such initiatives, although originally developed in response to individual needs, are often considered for a wider audience at another stage of development.

Another example of a course in this stage of development is an introductory drama class, where live broadcast lectures have been replaced by recorded lectures via videotape. Although not initially changing the teaching methodology, this shift has removed the lecturer's weekly responsibility for content delivery, allowing him more time to concentrate on the interactive aspects of the course. Tutorial class sizes have been reduced, allowing students more time to interact with each other and the course material. Regional students receive more feedback through interactive video tutorials and discussion boards. This past semester, regional students performed their class plays via interactive video conference to peers in Fiji and other member countries.

One of the first adopters of the VBC option was a land management lecturer. Many of his regional students are government officials working in land or resource management. In four years of VBCs, this lecturer's various courses have evolved significantly. He is pushing USP's ITS staff to enable encryption security sufficient for online examinations to occur, which would be a first for USP. The lecturer has reworked the traditional lecture format into blocks of 15 to 20 minutes, interspersed with self-assessment exercises for his students. Field trips are a favourite learning activity for on-campus students and the lecturer is pondering ways to export the experience to his regional students via technology. Once again, time devoted to content delivery is reduced, and the

lecturer is inspired to discover new options for more active learning amongst his students. The lecturer's goal is to create a fully online course augmented with rich student-lecturer and student-student interaction.

### **Stage 3**

In the final stage, which we haven't reached yet at this university, we hope lecturers will have developed hybrid courses, combining the best distribution of learning experiences after having tried them out in a safe environment. This is the new comfort zone whereby lecturers are confident in new teaching practices and are encouraging deeper levels of learning from the students.

## **CONCLUSION**

Much has been written about the harm in replicating face-to-face teaching in e-learning environments. Laurillard (2002) discusses the need to put the learning experience first, not the technology. While this is acknowledged, USP has found that such replication can, in fact, be a useful transitional stage.

In our experimentation with VBCs, we have found that this mode allows lecturers time and space to gradually develop their technological and pedagogical skills before changing the essence of their teaching practice. As the lecturers become more comfortable with the technology, then concerns for the students' learning experience come to the forefront and real changes in teaching practices begin to emerge.

There is much rhetoric about changing the way universities operate, but, on the whole, for USP, the lecture/tutorial format will remain for some time to come. Changing classroom practice is "an evolutionary process involving small increments of change rather than large ones" (Farrell, 2004). This is clearly where USP is today.

It is noteworthy that in some cases it is the students' enthusiasm for the new technology gently pulling lecturers forward in as much as university management is pushing from behind. As for the students' perspective, initial reports indicate that they are inspired by the new tools and, at times, freed by them from traditional cultural modes of communication influence by gender, social hierarchy, race and age.

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