

# Chapter 12

## Distance and Flexible Learning at University of the South Pacific

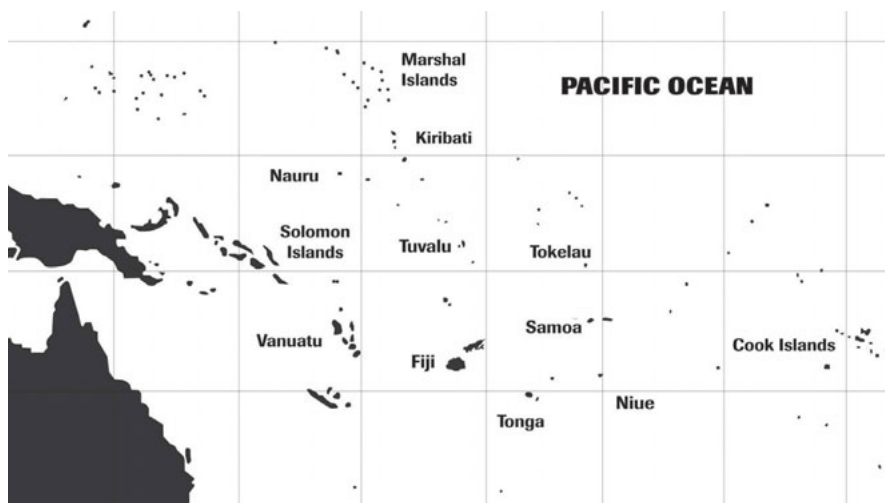
ANJEELA JOKHAN AND BIBHYA N. SHARMA  
University of the South Pacific

### **Introduction**

The University of the South Pacific (USP) was set up in the South Pacific region in 1968 by its 12 member countries — Cook Islands, Fiji Islands, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and Vanuatu. A total of 14 campuses and 8 smaller centres are spread over an area of 30 million square kilometres of the Pacific Ocean (See Figure 1). The smaller centres are parts of the larger campuses spread in remote locations or on the smaller islands in some countries.

The size of the campuses in member countries varies significantly, with a range of student numbers, courses offered, and facilities available. At one end of the spectrum is the main Laucala Campus (based in the Fiji Islands), which is the largest of all the campuses, enrolling about 14,000 students (full-time and part-time) at any one time. At the other end is the smallest campus in Tokelau, which has only about 20 students enrolled each semester. The regional campuses and centres are predominantly utilized to cater for the students enrolled in the Distance and Flexible Learning (DFL) mode of study. Most campuses have been appropriately

equipped and provided with other resources which may be utilized by the students enrolled in the DFL mode to help them complete their courses. Nonetheless, most of the “essentials” are located at the Laucala Campus, which has the central administration, including the registry, library, student academic services, vice-chancellors’ office, and the faculties and divisions. The main campus also acts as a central repository of exams, student and staff records, and other important documentation. These materials are shared with other campuses and centres if and when the need arises.



**Figure 1.** Map showing the 12 member countries of the University of the South Pacific. Map courtesy of the University of the South Pacific. Used with permission.

The University of the South Pacific is mandated to play a leadership role in overall capacity building and developing skills for knowledge-based societies within the South Pacific region. The university treats DFL as a matter of top priority due to the geographical isolation of the member countries and heavy work commitments that make it difficult for many students to attend classes during normal hours. There is a great demand for the DFL courses, as can be seen from the growing DFL enrolments and the increased number of courses

offered via this mode. Currently, 70% of USP students are studying (at least partially) by the DFL mode in the region.

In 1971, the university first began offering courses through the DFL mode of delivery, making them available to its off-campus students (Mataki and Koshy, 2004). Since then, the university has actively engaged in the development of high-quality DFL services and products for the region. The university has funded/co-funded a number of studies to help pilot its DFL deliveries across the region. Findings and recommendations from these studies have continuously improved DFL delivery.

A historic need that the university addresses with DFL delivery is the shortage of Year 13 (pre-university) education in most of the member countries. These member countries are unable to support education at the senior secondary level and to prepare the students for higher studies. Since they do not have Year 13, the students either have to go abroad to attain this university entrance qualification or enrol in the Foundation program offered by the university via the DFL mode. The initial focus of the Foundation year program in the member countries was for preparation for university studies. This demand still exists in parallel with the demand for undergraduate and postgraduate courses and programs even after four decades of continued service from the university.

There are a number of programs that are offered partially by the DFL mode. The students enrolled in these programs are able to complete most, if not all, 100-level and a few higher level courses through DFL mode and later complete their programs at the main campus. This would include most of the social science, mathematics, computing science, and information system disciplines. However, the process of conversion to DFL delivery in the area of science (core science disciplines) has been relatively slow, due in part to the challenges of delivering science education discussed below. Nonetheless, absence of full DFL delivery of programs is treated as a barrier to literacy and equity throughout the region (Lockwood, Smith & Yates, 2000) and as such the university is

committed to expand and diversify programs already offered in the DFL mode.

The University of the South Pacific offers a wide spectrum of distance and flexible learning options, including online delivery and print-based distance delivery. A full description of DFL at USP is available (University of the South Pacific, 2007). The DFL options for science courses are presented in Table 1.

**Table 1.** Distance and Flexible Learning (DFL) Delivery Modes for Science Courses at University of the South Pacific.

| <b>Distance and Flexible Learning Delivery Mode</b> | <b>Description</b>   |
|---|--|
| Print-based   | Students receive all the materials for a course in the beginning of an academic semester and are required to follow the course schedule. First year chemistry and biology and Foundation courses are offered in this mode. |
| Flexi-schools                                       | Four to six weeks of intensive teaching, mostly carried out by staff travelling from the Laucala Campus to the flexi-school venues; offered during semester breaks. Some Foundation courses are offered as flexi-schools.  |
| Video Broadcast                                     | Lectures from the face-to-face delivered courses at the main campus are broadcast to the local campuses and centres for the benefit of the DFL students. First year physics courses are offered by video broadcast.        |

USP provides academic support for its DFL students in a number of ways. Satellite tutorials are commonly utilized by the teaching staff for sharing knowledge with students from all the member countries simultaneously. Video conferencing is also used, and incorporates the benefits of conventional face-to-face teaching. Tutorial visits are normally held during the mid-semester breaks at various campuses in the region. Tutors and lecturers travel to the member countries and hold tutorial and/or lecture sessions for the courses offered by their divisions for a short duration (normally a week). Other visits

can also be accommodated based upon the requests from the various campuses. Finally, email/phone/fax facilities are in place for one-to-one transactions between the course coordinator or tutor and the student. Course materials and other important documents can also be exchanged via the fax and e-mail facilities.

## **Challenges and opportunities for DFL delivery in science**

### *Practical work*

Although science courses are in high demand in the USP region, their practical component imposes constraints on DFL delivery.

Laboratories in the regional campuses are adequately equipped to carry out the practical component of Foundation science courses. These Foundation science courses are offered in the print-based mode and/or as flexi-school courses. If offered as a flexi-school course, the course will usually run with the same assessment portfolio as the face-to-face offering, while the practical component of the assessment is left to be carried out at a centre or campus that has the appropriate laboratory facilities. On the other hand, if offered through print mode, the assessment portfolio will usually consist of a tutorial component, assignments, and mid-semester test as well as weekly practicals. Laboratory demonstrators and other helpers are employed either locally or from the region to help prepare and mount these practicals. Local tutors are also appointed, either full-time or part-time, to assist in the delivery.

One of the biggest challenges is the lack of proper laboratory equipment in the senior schools of the member countries. While some countries that teach Year 12 initially had partially equipped laboratories, schools in other countries had to be funded by the university to upgrade their laboratories for the practical work in Foundation science courses. In the larger campuses, for example in Tonga, Samoa, and the Solomon Islands, the university has fully funded the construction of the science laboratories.

Another challenge in delivering practicals in regional locations is that most of these member countries do not have the technical support necessary to maintain and run the laboratories. For example, regional countries are not equipped for the storage and use of chemicals. Also, there is a lack of sufficient expertise to maintain equipment such as microscopes. In some instances it is necessary to transport the equipment to and from the regional campuses to complete the practical component of the courses. The equipment and consumables are ordered through the main campus in Laucala and transported to the regional campuses, since there is no system or staff in the regional campuses to do this.

First year (or 100-level) practical science courses are not offered at all the regional campuses, mainly because of the lack of adequate laboratory facilities. Also, some of the smaller campuses have very few students (normally less than five), and to run laboratory classes in these campuses is a very expensive exercise. As a consequence, the first year science courses are only offered in campuses where adequate laboratory facilities exist together with a sizable enrolment.

All of the first year biology and chemistry courses are in print mode, while the physics courses are run in the video broadcast format from the Laucala Campus. The courses offered through print mode are run as 30-week courses (as opposed to the 15-week on-campus courses), and in most cases, the laboratory classes are run as a block toward the end of the year at the regional campuses. Students registered in the science courses in the other two campuses in Fiji travel to the main campus to do block laboratories during the second half of the year, as there are no laboratories set up at the other two campuses in Fiji for this purpose. In the other countries, the practical work is organized and run by staff travelling from the Laucala Campus. Staff are also required to take the consumables from the main campus with them to run these sessions. This is not only an expensive exercise but is also very labour-intensive.

In the case of first year courses in plant and animal biology, transportation of specimens and consumables for the laboratory work is critical because many of the atoll islands have distinctly fewer plant and animal species and so the availability of teaching materials is rather limited. The introduction to students of the plant and animal kingdoms requires many unique biological specimens that are frequently not found in countries with limited flora and fauna.

There have been numerous discussions on the possibility of using virtual laboratories in the regional campuses. In 1996, the Biology Division experimented by sending out videotapes of laboratories designed and demonstrated at the main campus. At that time, the laboratory facilities for Foundation science courses were still inadequate. The response from the regional campuses was that because of poor understanding of the English language the students did not benefit much from these videos. Since then the campuses have become better equipped to hold Foundation laboratories and there are now local tutors who run tutorials and laboratory sessions in the regional campuses for Foundation science courses.

For baccalaureate level courses, regional practical laboratories have not been used because of the lack of teaching support in the regional campuses. The university is trying to increase the face-to-face component of the courses offered in the regional campuses because experience and post-implementation reviews have clearly shown that this is more effective for the students than totally independent learning. The laboratory component has been seen as one way of doing this, but the fact remains that this is an expensive method of delivery. The university is considering other options for the laboratory component, such as laboratory kits.

The spatial vastness of the USP region is an added challenge for the university. In the member countries where adequate infrastructure is not available to support the practical component, the offering of the practical science courses presents an even bigger challenge. Firstly, travel within the region is limited by the infrequency

of flights to most of the member countries. Normally flights are available only once a week, and because of economic considerations these are relatively more expensive flights. Travel to Tokelau, which is a very small country, takes three days and even requires travel by boat for a considerable part of the journey, an example of the other extreme of remoteness. In some instances quicker travel is possible transiting through Australia or New Zealand; however, costs for these travels escalate. As a consequence, members of the academic staff are unable to travel from Laucala Campus as often as would be desirable to the region to provide much-needed support to students and ensure quality of delivery of the courses. As a result, the academic sections in Laucala Campus rely on staff in the regional campuses as much as possible to ensure that the delivery on the ground is of high quality and that the support staff situated at the local campuses provide the necessary support for students. The cost of employing academic support staff on each campus for every discipline is very high, hence only some disciplines are able to employ the required numbers of staff. These would normally be those disciplines that are able to attract an economically viable number of students. The other disciplines need to either rely on remote support from the Laucala Campus or provide support in the form of staff travelling from the Laucala Campus.

Some of the member countries are very small, and so hiring academic support staff locally provides the university with a real challenge. This is not because there is a lack of qualified locals but rather due to the fact that these qualified locals would already hold good jobs (mostly within the government) and therefore not be available to be employed either as full-time or part-time staff of the university. This means that hiring expatriate staff (from Fiji or elsewhere) becomes a necessity and the expenses escalate even more.

### *Challenges for students*

Students in the region face the challenge of studying in the English language. In some countries English may be the third language

and English may not necessarily be used in schools, either formally or informally. For example in Vanuatu some schools are teaching in the French or Bislama languages so it can become increasingly difficult for students to study in English at tertiary level. The main obstacle is the understanding of text in the English language. Experience has shown that most students read text in English, translate it as best they can into their own language in order to understand it and then either learn or respond to it. They learn or respond in their own language initially, and then attempt to translate it back to English before writing or speaking. In all this translation, information can be lost or misrepresented. This is perhaps more serious where scientific vocabulary is used (Jokhan, 2003).

Language barriers are a major challenge to delivering university education. The university is expected by its member countries to provide distance education to students from rural areas as well as the regional campuses, but there is a question of sustainability when so many students need extra support to study in the English language. The university is always challenged to arrive at a reasonable compromise between maintaining sustainable programs and providing as much support as possible for the DFL students.

The secondary education system in the region is still quite traditional and has limited resources. For example, a high percentage of the students in the region would have completed their secondary schooling without ever having had any experience using a computer. So, in some academic programs more than others, the university must address fundamental computer skills in addition to the disciplinary content.

Many students are not prepared for the independent nature of DFL courses. This may derive from the traditional secondary system, where there is a strong culture of respect in terms of always accepting what the teacher says. The transition to learning in the DFL mode is a bigger shift in study culture than going from school to face-to-face university studies.

The need for making student orientation at the regional campuses more focused toward preparing students for study in the DFL mode and improving time management has been identified. A number of campuses are implementing a project developed by the Centre for Educational Development and Technology (CEDT) to build these study skills as a pilot study. It is anticipated that this important initiative will become essential in improving the success of students studying in the distance and flexible modes.

### *Traditional academic culture*

A hard-to-change constraint on healthy growth of high-quality DFL products and services in USP is the difficulty in changing the organizational culture. Teaching staff around the world are not very comfortable changing from the traditional forms of delivery. Many lecturers are apprehensive and resistant to change and innovation. Nonetheless, support (in terms of training and personnel) and a reward system can change the organizational culture and persuade lecturers to contribute more to the DFL mode of study. The university has taken a number of steps in this direction. Firstly, it has restructured the existing University Extension unit to the Distance and Flexible Learning Support Centre (DFLSC) situated in the main campus. The support centre now champions the DFL delivery, provides staff and student training, makes media decisions and administers the DFL activities across its campuses and centres. Secondly, the university has proposed that its Graduate Certificate in Tertiary Teaching (GCTT) program be made compulsory to all academic staff without formal teaching qualifications, to help them to facilitate and service the DFL mode of study properly. In the past few years, many USP faculty members have benefited tremendously from this program, and it has led to increased favourable responses from student course evaluation reports and formal/informal correspondences with respect to their classroom teaching and DFL deliveries. Finally, the university has made sure that commitment to DFL work is now an additional performance indicator

for the academic staff. A reward system is put into place where staff involved in DFL work are incremented or given cash bonuses during their performance review or renewal of contract.

## **Conclusion**

The University of the South Pacific plays a large role in developing skills for knowledge-based societies within the South Pacific region. USP's commitment to the DFL mode of study has achieved international recognition. This is demonstrated by the substantial funding that USP attracts from donors such as Australia, New Zealand, and Japan specifically dedicated to DFL activities. In addition, the university continues to be recognized in the form of international awards that it receives in the DFL area. USP delivers a range of science courses in the DFL mode, but challenges related to geography, language, and culture need to be overcome in order to successfully offer science courses through DFL. USP has achieved some success in this area and is committed to expanding and diversifying programs offered in the DFL mode.

## **Acknowledgments**

We wish to acknowledge the Pro-Vice Chancellor Regional at USP for agreeing to allow us to use USP information for this work.

## REFERENCES

- Jokhan, A.D. (2003). Teaching science in the region. In A. Kirkness & N. Fanene (Eds.), *Teaching and learning with Pasifika students: A Colloquium for Tertiary Teachers* (pp. 73-77). Auckland, New Zealand: Centre for Educational and Professional Development, Auckland University of Technology. Retrieved February 25, 2009 from: <http://www.aut.ac.nz/resources/staff/cepd/proceedingsofpasifikacolloquiumfebo3.pdf>
- Lockwood, F., Smith, A., & Yates, C. (2000). *Review of distance and flexible learning at the University of the South Pacific*. University

of the South Pacific: Suva, Fiji. Retrieved February 25, 2009 from: <http://www.usp.ac.fj/fileadmin/files/academic/pdo/digitised/ReviewOfDistance%26FlexibleLearningAtUSP-2000.pdf>

Mataki, M., & Koshy, K. (2004). *Learning methods and networking to bridging the knowledge and learning gaps in small island developing states*. (USP Assessment Report for IDRC-UNDP Project). University of the South Pacific: Suva, Fiji. Retrieved February 2009 from: [http://www.usp.ac.fj/fileadmin/files/Institutes/pacesd/Research/USP\\_DFL\\_Assessment\\_Report.pdf](http://www.usp.ac.fj/fileadmin/files/Institutes/pacesd/Research/USP_DFL_Assessment_Report.pdf)

University of the South Pacific (2007). *2007 Distance and flexible learning handbook*. Suva, Fiji. Retrieved February 25, 2009 from: [http://www.usp.ac.fj/fileadmin/files/public\\_relations/2007\\_dfl\\_handbook.pdf](http://www.usp.ac.fj/fileadmin/files/public_relations/2007_dfl_handbook.pdf)