e-Learning and Educational Service Delivery- A case study of the University of the South Pacific (USP)

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ABSTRACT
e-learning in the South pacific region appears to have received relatively little attention. This study was aimed at better understanding of e-learning and its relevance in terms of improving the quality of educational service delivery to students at the University of the South Pacific (USP). The literature shows that the developing countries are failing to identify potential areas of e-learning applications because of which they are lagging behind the developed countries, particularly, in terms of improved service delivery to their citizens. The results of this study indicate that e-learning at USP represents most of the characteristics of the primary, and document management stage of knowledge management. The on-line interactions between information provider and receiver are not intense, and it explains that the second level of knowledge management is not much developed.

Key Words: ICT, e-learning, DFL, Online Distance Learning (ODL), Educational Service Delivery, USP.

INTRODUCTION

The concept of e-learning is defined as the “use of information and communication technologies (ICTs) to enhance and/or support learning in tertiary education” (OECD, 2005: 11). Ferl Practitioners’ Programme (FPP) (2006) and Waterhouse (2003) have given similar definitions. e-learning is applicable to distance learning and can also be used in conjunction with face-to-face teaching, in which case the term Blended learning is commonly used.1 Rosenberg (2001) observed that because E-learning is networked, it makes it capable of instant updating, storage/retrieval, distribution and sharing of instruction or information. As per Rosenberg this is the next great “restructuring” technology that transforms the world into a global village of unbridled connectivity. This transformation highlights the shift from traditional classroom-based teaching/learning to the e-learning paradigm. E-learning has the potential to revolutionize the education all over the globe. For example, Fry (2001), Richard (2002), Jessup (2000) have all highlighted the enormous potential of e-learning in revolutionising the education services delivery. Hawkridge et al. (1990) have talked about the underlying rationales for e-learning as: social, vocational, pedagogical and catalytic. The social factor recognizes the

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role that technology plays in society; the vocational factor prepares students for jobs that require technical skills; the pedagogical rationale assumes that technology will assist the teaching and learning process; and catalytic rationale explains that technology can make a positive effect on educational system as a whole by altering the relationship between the teacher and the taught.

Rosenberg (2001) identified 11 major benefits of E-learning as follows: E-learning lowers costs, enhances business responsiveness, messages are consistent or customized, is need based, content is more timely and dependable, learning is 24/7 (anywhere any time), no user “ramp-up” time, universality, builds community, scalability, leverages the corporate investment in the web, and provides an increasingly valuable customer service. However, while e-learning creates opportunities but it may also create disparities, new divisions and cultural hegemonies (UNESCO, 1999; Gladieux and Swail, 1999). The potential and capabilities of ICT supersede its documentation because of its complexity and speed in development (Homan and Macpherson, 2005). Sife et al. (2007) have reported that “ICTs have not permeated to a great extent in many higher learning institutions in most developing countries due to many socio-economic and technological circumstances”.

This paper is an attempt to investigate whether e-learning has any impact on improving quality of educational services delivery at USP (one of the two regional universities in the world representing twelve Island countries of the South Pacific Region. The USP region covers thousands of islands, spread over 33 million square kilometers of the Pacific Ocean with 1.9 million people, hundreds of distinct cultures and many different languages. USP is a dual mode teaching institution and has 3 campuses and 14 centers, one in each of the member island nations²). This study contributes to our understanding of e-learning services that can be provided to the distance learning students at USP. The research also investigates the present status and quality e-learning services at USP besides providing valuable information on key issues such as the potential of e-learning

² The only other regional university in the world is the University of West Indies.
in the South Pacific Region. Findings will provide valuable information on key issues such as potential of e-learning in the South Pacific Region.

POTENTIAL AND STATUS OF E-LEARNING AT USP

Kean (2003) mentioned that e-learning in Fiji is a new concept which is mainly used by the University of the South Pacific (USP). At USP, some courses are available online so that the students, particularly from widely dispersed, remotely located and isolated twelve Island Countries of the South Pacific region (such as: Fiji, Solomon Islands, Tonga, Samoa, Vanuatu, Nauru, Tokelau, Tuvalu, Kiribati, Marshall Islands, Cook Islands, Niue) can attend lectures through e-learning. According to Kisum (2003), most of the populations in Fiji are not aware of e-learning, but it has commenced at some tertiary institutions, due to which it is slowly filtering down to the other potential users of e-learning. Kisum (2003) further pointed out that considerable work needs to be done to promote e-learning in Fiji before it can be used as an effective tool for education and training.

The Distance and Flexible Learning (DFL) initiative of USP utilises e-learning to deliver courses to other countries in the region and locally. University Extension (UE) promotes or creates awareness of e-learning at various levels using various modes. At USP, 15 courses are being taught via e-learning each year. USP has placed a lot of emphasis on e-learning technology for DFL since March 2000 when it upgraded and re-launched the ‘USPNet’ (USPNet is operated by Information Technology Services at USP and is a satellite-communications network connecting all 12 member countries of the University). The services provided by the USPNet are: audio-conferencing, tutorials, and counseling; audio-graphics tutorials; video conferencing workshops/tutorials; video broadcast workshops, tutorials, lectures, and science demonstrations; USP intranet access and online resources; use of online platforms incorporating discussion groups, e-mail, assignments, chat rooms, etc.; data transmission of banner, library, and other servers; and more efficient administrative processes conducted electronically.
To adapt to the e-learning environment, all those involved in e-learning (trainers, teachers, students and administrative staff at University Extension) have switched to new methodologies and techniques. They have been trained in different areas relating to e-learning; and orientation and presentations are organized and conducted on a regular basis to assist them to adapt to the new methodologies and techniques. Whelan (2008) has also aptly observed that training and capacity building, curriculum development, infrastructure, finance, renewed policy initiative and top-down government support are important factors for ICT in education.

Bakalevu and Tuitoga (2003) in a study found that only twenty per cent of schools in Fiji have Internet access and that also is mainly for the use of teachers. In their study, the authors comment that while most schools have more than 10 computers, a few have small local area networks (LAN) with a server facility for sharing information and Internet services. It is highlighted that Internet access at teacher training institutions (apart from USP) is poor. According to Bakalevu and Morrison (2005), Computer Studies is scheduled in Fiji’s formal school curriculum but it is not a core subject and in their work the authors state that only 55% of secondary schools selected it in 2003. According to their research, as per the evaluation of the Computer Studies curriculum, most of the students and teachers view is that the curriculum lacks practical experience. Moreover, the shortage of qualified Computer Studies teachers further escalated the problem as teachers who did not have formal computing science qualifications were teaching computing science subjects. According to the “Evaluation of the Computer Science Curriculum in Fiji Secondary Schools” under JICA’s ICT Capacity Building at USP Project funding; in 2002, 86 (55%) of the 156 secondary schools in Fiji offered CS/IT education. Of these 86 schools, 35 (41%) had Internet access3. From the findings of

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Whelan (2008), internet and computer access on average for primary and secondary schools is well below 10 percent and tertiary urban access is around 70 percent.

Kean (2003) further reported that due to expensive infrastructure involved and the high cost of accessing the Internet, many training institutions have not chosen to use e-learning to communicate to their students. The traditional classroom-based approach is still the preferred model for education and training. Kisum (2003) had also reported that telecommunications monopoly, cost, access, connectivity, lack of general awareness of the Internet and e-learning and bandwidth are key barriers in the use of e-learning by training institution sin Fiji.

The key potential benefits resulting from the use of e-learning by training institution sin Fiji were highlighted by Kean (2003) and which included training to students in an inexpensive manner (costs associated with traveling to a training center will be reduced as geographical barriers can be overcome) and students having access to the highest quality of education and training from around the world. A further plus point would be reduction in the need for centralized investment in the main education and training infrastructure. The challenges highlighted were that educators and trainers will need training and familiarization with the technologies involved in e-learning besides the need for organizational policies to support students, and programs to educate them in the use of e-learning.

Kato’s (2005) research on ‘Fiji’s Information Economy and the Role of ICT Literacy Education in The Age of Broadband’ looked at the significant role of ICTs in promoting ICT in schools. Three major problems were identified as : a strong demand from students and teachers for a curriculum update; inequities in access, among students, among schools offering computing science education, and among the entire range of secondary schools; and concerns about teachers’ job security and professional capacity development that hampers ICT usage in education. Research by William et al. (2004) amongst USP students found no significant difference in performance between the students who had
taken computing science subjects in secondary schools and those who did not take computing science subjects.

At USP particularly, from 2000-2006, the learning management system (LMS) was WebCT, and the School of Law (SOL) was using EDISON/eaSOL (homegrown LMS). More than 50 courses are being offered at USP through WebCT and another 50plus courses on EDISON/eaSOL. It is also worth noting that from 2007 onwards, USP has been using LMS which is popularly known as Moodle⁴.

Table 1: Moodle Courses Offered At University of the South Pacific by Semester

<table>
<thead>
<tr>
<th>Semester</th>
<th>On Campus</th>
<th>On Camp./Distance and F* - Learning</th>
<th>Distance and Flexible Learning</th>
<th>Total Courses</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3</td>
<td>5</td>
<td>-</td>
<td>8</td>
<td>1201</td>
</tr>
<tr>
<td>2008</td>
<td>15</td>
<td>30</td>
<td>8</td>
<td>53</td>
<td>6144</td>
</tr>
<tr>
<td>2009</td>
<td>50</td>
<td>52</td>
<td>8</td>
<td>92</td>
<td>8478</td>
</tr>
</tbody>
</table>

Source: Centre for Flexible and Distance Learning. 2009. Moodle Stats & Future Plans - Course Design & Delivery (CDD), University of the South Pacific.

*F-Flexi learning

Table 2: Moodle Courses Offered At University of the South Pacific by Faculty

<table>
<thead>
<tr>
<th>Faculty of Arts</th>
<th>On Campus</th>
<th>On Campus/Distance and Flexible Learning</th>
<th>Distance and Flexible Learning</th>
<th>Total Courses</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2007</td>
<td>2</td>
<td>15</td>
<td>4</td>
<td>21</td>
<td>682</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>13</td>
<td>6</td>
<td>23</td>
<td>1780</td>
</tr>
<tr>
<td>2008</td>
<td>12</td>
<td>16</td>
<td>7</td>
<td>35</td>
<td>2938</td>
</tr>
<tr>
<td>2009</td>
<td>17</td>
<td>28</td>
<td>4</td>
<td>49</td>
<td>3617</td>
</tr>
</tbody>
</table>

⁴ Hazelmen, Valentine. 2009. Centre for Distance and Flexible Learning. Email Communication.
<table>
<thead>
<tr>
<th>Faculty of Business and Economics</th>
<th>On Campus</th>
<th>On Campus/Distance and Flexible Learning</th>
<th>Distance and Flexible Learning</th>
<th>Total Courses</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1 2007</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Semester 2 2007</td>
<td>3</td>
<td>5</td>
<td>-</td>
<td>8</td>
<td>1201</td>
</tr>
<tr>
<td>Semester 1 2008</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Semester 2 2008</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>889</td>
</tr>
<tr>
<td>Semester 1 2009</td>
<td>8</td>
<td>9</td>
<td>-</td>
<td>17</td>
<td>2489</td>
</tr>
<tr>
<td>Faculty of Science, Technology and Environment</td>
<td>On Campus</td>
<td>On Campus/Distance and Flexible Learning</td>
<td>Distance and Flexible Learning</td>
<td>Total Courses</td>
<td>Total Students</td>
</tr>
<tr>
<td>Semester 1 2007</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>8</td>
<td>1201</td>
</tr>
<tr>
<td>Semester 2 2007</td>
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<td>-</td>
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<tr>
<td>Semester 2 2008</td>
<td>30</td>
<td>18</td>
<td>1</td>
<td>49</td>
<td>4641</td>
</tr>
<tr>
<td>Semester 1 2009</td>
<td>33</td>
<td>15</td>
<td>2</td>
<td>50</td>
<td>4293</td>
</tr>
</tbody>
</table>

Source: Centre for Flexible and Distance Learning. 2009. Moodle Stats & Future Plans –Course Design & Delivery (CDD), University of the South Pacific.

The results based on the above indicate that e-learning at USP represents most of the characteristics of the primary, and document management stage of knowledge management. The on-line interactions between information provider and receiver are not intense, and it explains that the second level of knowledge management is not much developed. This is the consequence of lack of infrastructure, which is common in the small-sized universities from small countries like Fiji.
CONCLUSION

The results obtained from this study confirm earlier finding that e-learning has the potential to improve the service delivery to the students in the South Pacific Region. However, this is an important area that needs to be investigated further. The main purpose of this paper was to contribute to an improved understanding of the potential of e-learning in improved quality of educational service delivery. The literature also shows that the developing countries are failing to identify potential areas of e-learning applications because of which they lag behind in terms of development. Recently, e-learning has received considerable attention from researchers which is due to the pivotal role of e-learning in improving education service delivery for the clients (students). The literature survey has failed to provide any evidence of methodologically sound and empirically reliable research on e-learning for improved educational service delivery in Fiji.

In light of the above statistics on e-learning using Moodle at USP, future research should identify the readiness level on e-learning and then see how it may help in improved educational service delivery. The focus of future research should be specifically on the tertiary institutions in terms of assessing the quality and effectiveness of e-learning in improved educational service delivery in comparison to on-campus (face to face) or traditional means of knowledge sharing.

REFERENCES


