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Re-designing a library website for sustainability

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Abstract
One of the most common frustrations for users of the Web is to come upon outdated material or broken links. Conversely, for libraries with limited resources of time and personnel, maintaining a dynamic site that is sustainable is often difficult. The University of the South Pacific (USP) Library is such a library which has the additional problem of serving 12 countries (Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu) spread across a wide expanse of the Pacific Ocean. Although the USP Library has had a Web site for the past eight years, it had become increasingly difficult and time consuming to add content and remain current. The Library does not employ a full-time Web developer; nor is any one of the professional library staff assigned the responsibility of Web design or content management.

Recognizing that the Web site often serves as the "face" of the library and the first access point, USP Library began a process in early 2004 to ensure that the Web site content not only remains current but that content be provided that adds value and showcases the Library's resources. A core group of professional librarians meet regularly as an ongoing committee to work with the library analyst/programmer who acts as part-time Webmaster. Each section of the site is systematically reviewed and updated. The goal is not only to build

digital content into the site but also to ensure that information on the site is updated in a timely fashion.

This paper describes the process that has evolved during the past year and a half, including timeline, design features and publicity (Know Your Web Site contest). The two overriding principles guiding the process are highlighted, namely "keep it simple" and "deliver value with each click". Guiding principles as well as challenges are offered in order to encourage other libraries with a similar background to undertake and achieve a sustainable Web site.

Sustainability can be defined in numerous ways but basically it is "a state or process that can be maintained indefinitely".

"One of the most important things to consider is whether you have the resources to keep your Website going. If you start off with a small site you need to plan ahead …" (University of Leicester 2001).

Background
Established in 1968, The University of the South Pacific (USP) is jointly funded by twelve island nations: Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Samoa. The main campus, Laucala, is in Suva, Fiji. There is a second campus, Alafua, in Samoa where the School of Agriculture is situated, and a third, Emalus, in Vanuatu where the School of Law operates. There are University Centres in all twelve member countries.

The USP region spreads across 33 million square kilometres of ocean, an area more than three times the size of Europe, and across five time zones and the International Date Line. In contrast, the total land mass (65,144 sq km) is almost one fifth of that of Norway (306,800 sq km). Populations vary in size from Tokelau, with 1400 people, to Fiji with 850,000.

This year (2005) a total of 18,100 students are enrolled at USP. This translates to 11,329 Full–Time Equivalent Students (FTES) of which 7,071 study by on-campus (Internal mode) and 4,258 study by distance and flexible mode. The University owns and operates USPNet, a USP-dedicated telecommunications network which allows distant students to participate in audio tutorials, access the Internet, watch a live video broadcast of a lecture from any of the three campuses and take part in video conferences with the Laucala Campus.

The digital divide is very much in evidence in the USP region, not only within each country but also among the countries and between the region and industrialised countries. Take for example Fiji, considered the more developed country in the region. Latest figures (Internet World Stats 2005) indicate that although Internet usage in Fiji has grown by 633.3% from 2000-2005 only 6.5% of the population has access to it. Despite globalisation and our ability to leap-frog information communication technology (ICT) developments, professionals in the region are still far from the cutting edge due to isolation.

The main library on the Laucala Campus in Suva was established in 1969, a year after the University was founded. It is a three storey building with nearly 800 seats for readers and

more than 860,000 volumes. In 2004, there were 11,622 registered users who borrowed a total of 131,196 items. There are two other Campus libraries: one at Alafua, Samoa and the other at Emalus, Vanuatu. Centre libraries have been established in all twelve USP member counties and there are also eight Sub-Centre libraries.

Currently there are 22 professional librarians, 18 of whom are based in Laucala, two in Emalus, and one each in Alafua and Solomon Islands. Due to lower salary levels and other external factors it is difficult to recruit and retain professional staff. Of the current staff, half originate from metropolitan countries and half from the Pacific Islands. This year's budget for the purchase of library materials, both print and online, for all campus and centre libraries is F$1,659,600 (€ 830,000).

This is the context in which we have attempted to "create an economical web site that is easily updated and maintained" (Lavin 2003).

Looking Backward
The last eight years has been a story of stop and start in the life of the USP Library website. The original website was designed in 1997 by one of the librarians through her initiative and with minimum input from other staff. It served as little more than a directory/guide to general information about USP Library and consisted of text taken directly from the print brochures and guides. Links to external websites were few and far between. Over the next two years little was amended or added to the site apart from a page of links to online journals which the library received courtesy of its print subscriptions. This page was compiled and maintained by a Reader Services Librarian, who happened to have an IT background, until he resigned in early 2001. In July, 2001, the Emalus law librarian conducted a short "information" workshop for Laucala staff on creating a page of useful links; although the staff viewed the sessions positively little eventuated from it in real terms. Material on the website was by now outdated and many of the links to the online journals were broken. It could now be classified a "failed site" in that it detracted rather than added to the library's presence (Lavin 2003). It was not until a year later that the development of a new library website commenced.

Towards the end of 2001 the library received funding from AusAid for a digitization project, as a component of the University's Distance and Flexible Learning Project. The funding was initially used in part to purchase new electronic resources, including ProQuest databases. Later on it paid for an analyst programmer who would greatly assist with the website re-design process. In the meantime, the library hired a consultant, who had web development experience but no library background, for two weeks in August 2002 to "update the website and put in some changes, though we won't be able to change it radically" (Yee 2002). To start the process a brainstorming session was held with all senior staff to discuss the contents and structure of the homepage. Predictably, the meeting was a long, drawn out affair as we all had different ideas and wanted our section/collection to receive prominence on the home page. By the end of the meeting no consensus had been reached, but we had agreed that a small committee, consisting of four staff, would "co-ordinate the overall development/structure of our website so that we have consistency" (Yee 2002). Over the two week period each head of section worked with the consultant on the details and content of their respective pages. The first priority was the electronic resources i.e. the databases and

online journals to which the Library subscribes and which are available via IP address to computers linked to the USPNet . Another positive step was the creation of generic e-mail addresses for the different sections. Although the end result was a better looking site which allowed easier access to the online databases, much of the content was still not "web-friendly" i.e. not written with the user in mind. The site would not be updated for another 18 months but the design and hierarchy had been established.

Sustainability: Less IS More
In early 2004 a number of factors converged to reinvigorate the library web committee. Two new Reader Services librarians, both of whom had an interest and expertise in library websites, were hired. The Reader Services section wanted to develop more content rich user education materials, specifically links to the Information Literacy Programme modules and a virtual reference service (VRS). Additionally, because of our Pacific focus, we wanted to develop content rich resources related to the Pacific in general and to the twelve USP member countries, in particular. The online databases page also needed updating due to new resources. The membership of the new committee reflects these areas as it includes the two Reader Services librarians and the Pacific Collection and Serials librarians. It also includes the analyst programmer who, as previously mentioned, has played an important role in the redesign process.

Finally, in early 2005, USP became a member of AARNET (the Australian Academic Research Network) which significantly improved the Internet bandwidth (from 1mbps to 155mbps) and allowed us to feature services like the online indexes and databases and online law collection. Speaking at the inauguration in March, the acting Vice Chancellor, Professor Chandra said that this increase in speed was a sea change for USP, characterizing the improvement as going "from a snail to a race horse''. However, this increased bandwidth is currently only available at the Laucala Campus in Fiji. It is hoped that the bandwidth for the other campuses and centres will be increased in the near future so that users can take full advantage of the improved access to digital resources through computers on the USPNet.

Initially, the web committee thought about a whole new design, but after looking at many other academic websites and establishing the guiding principles (see below), the committee came to the conclusion that overall the current design worked. This is not to say that redesign is a time saver; during the first few months, the committee met once a week to discuss, rearrange and rediscuss the elements of the site as the content and usability evolved. One thing that became readily apparent was the differing approaches taken by the librarians and the analyst programmer. With a lot of good humoured teasing, we realized that the design, if left to the IT person, would have all the latest features and a lot of flashy graphics.   Our advice is to constantly come back to the guiding principles you establish and do not be unduly influenced by the latest IT bells and whistles.

To facilitate discussion and provide a "paper trail" of the decisions we reached, we established a group e-mail, "weblibrary" that included all the committee members and the Deputy University Librarian, Technical Services. The chair took notes and after each meeting, not only a summary, but an action item list, was sent to the committee members. At

the beginning of each meeting, the action list and completed items were reviewed and checked off.

Susanna Davidsen and Everyl Yankee, in their book *Web Site Design with the Patron in Mind: A Step-By-Step Guide for Libraries,* provide an excellent discussion of the phases in redesigning a site. They make the important distinction that "cosmetic changes are not redesign—in fact they are steps backward in providing a site your patrons will use and like". The committee started by removing pages that were completely outdated or no longer relevant. This operating principle can be summed up as less is more, in other words it was better to have less information to start with but to make sure that what was there was current and correct. It also applied to our design philosophy as we removed flashing icons and pared down other extraneous graphics to a more clean and simple design. During the first few months, the committee met once a week to grapple with the initial design changes.

An important early decision was to break the site down into a manageable size by revising one section at a time. We started with those sections that committee members were responsible for, i.e. Reader Services, Pacific Collection, and journal and database collections. In most cases content was created or links added to provide additional resources, such as the case of the Pacific Collection with an extensive collection of Pacific related links developed and maintained by the Pacific Collection librarian, Tony Dadalo. In some cases, existing print materials were scanned and added as PDF files, for example the Reader Services brochures. None of this took place in a vacuum; issues were dealt with that needed attention as they came up at the same time as we worked on each section. In some instances we discovered that the library had not established a policy in which case we had to take the issue to library management or a senior staff meeting for a decision to be made.

Guiding Principles
From the first meeting of the web committee, a number of essential elements were discussed that evolved to become the underlying principles for our site development.

1. Create the "face" of the library
Often the first access point for both university members and overseas visitors is the library's website. In redesigning the site the committee wanted to provide a sense of place, both virtual and real. We wanted those who came to the site to experience the full range of resources and services, especially since many of our users are not on campus. At the same time we wanted the website to reflect the overall design of the University of the South Pacific main page http://www.usp.ac.fj/ so that users would make the connection between the university and the library. Consequently we kept similar colours and layout of the header and footer used by the USP site.

2.   Promote the library website as the "starting point"
Whether the user is physically in the library, in a computer lab, office or off campus, the website should be the starting point for the full range of options to discover, locate, request and receive information. Each of the sections includes a contact e-mail; staff contact information is provided and the Ask A Librarian option can be used by anyone with an information request. Our vision is a seamless service for onsite and remote users alike.

Many of the major changes were in place by the start of the new semester in February 2005. The committee felt it was time to start promoting the site and the resources and services available. It was decided to have a Knowing Your Website Contest that would run for the entire first semester. A competition was first held among the library staff to think up suitable questions for the contest. This served to make our own staff more aware of what the site had to offer. Each week a question was posted under the 'What's New Section" and all students were eligible to enter the draw for a F$10 voucher generously provided by the USP Book Centre. The correct answer had to include both the text answer and the URL or address of the website page on which the information was found. The number of entries averaged around twenty per week. While this does not seem many, it became obvious that students were telling others about the contest as different people were entering each week.

The other main way of promoting the site is through the library's Information Literacy Programme, where each session starts by showing the site, emphasizing the URL and telling students this is the place to start. The website URL is now included in all the library's promotional materials and email signatures.

3.   Ensure the site is easy to navigate
Another guiding principle is that information can be found quickly and with a minimum number of clicks. That a user should be able to find what they are looking for in three clicks has become something of an axiom in website design. Another common rule is that content must be easy to read on the screen, i.e. users are much more likely to scan or skim the information than read it word for word. One way to achieve these results is with the good use of headings or categories. If possible try to avoid using library jargon and try to think like those who will be using the site. The ease of navigation is also promoted by a straightforward and uncluttered site. White space is not a bad thing. We also wanted to keep the top level page to one screen.

4.   Ensure the site is content rich
Broadband connections and increased bandwidth are attracting a new generation of users and making possible for libraries to add value, i.e. provide richer content. As we have mentioned, early this year, USP negotiated a connection to the Australian Academic Research Network (AARNET) which increased tremendously the speed in loading web pages and database full-text articles. We have targeted development of what is unique and special in our collections. Original content is what distinguishes one website from others. In the case of USP Library, one of the underlying goals was to add as much Pacific related content as possible. In addition to the Pacific Collection, other unique collections include:

- USP Law Library which is physically located in Emalus Campus, Vanuatu. It is primarily an online collection that supports the online law programme. Developed and maintained by law librarian Peter Murgatroyd, it is an immensely rich online collection of law indexes, digitized documents, and Pacific law resources
http://www.vanuatu.usp.ac.fj/library/Resource%20Pages/Law.htm

- Pacific Islands Marine Resources Information System (PIMRIS) which supplements the Marine Studies Programme materials housed in the Lower Campus Library at USP
http://www.usp.ac.fj/library/collection/pimris/pimris.htm

- Two initiatives with a broad Pacific region focus
Pacific Regional Initiatives for the Delivery of Basic Education (PRIDE)
http://www.usp.ac.fj/library/collection/pimris/pimris.htm
and Oceania Sport Information Centre (OSIC).
http://www.oceaniasport.info/

5.   Ensure accuracy and timeliness of information

As mentioned earlier, one of the first changes made was to remove outdated information and broken links. As Kim Guenther notes in her excellent article on website management, "writing and keeping content up to date is likely one of the most expensive tasks associated with Web site management". It is also the most time consuming. One of the advantages of web information is that it can be much more current than any print counterpart. Keeping a site current is one of the biggest challenges. One solution is to keep to a minimum the type of information that has to be updated frequently. However, if such information as a staff directory is provided, it is essential that the information be current and accurate. As part of the weekly meetings of the committee, sections that needed updating, such as the Staff Directory were added to the "To Do" list for the analyst/programmer.

These are the five guiding principles that form the basis of the sustainability of the USP website. As the quote that opens this paper implies, starting small is no barrier to future growth and development. These guiding principles apply to initial site design and should continue to guide the site as it grows and develops. As we have seen at USP Library, we continue to come back to these principles as we transition to a website that brings traditional library strengths to a digital library of the 21st century.

Looking Forward

Redesigning the USP Library website has not been without its challenges. In April this year our analyst programmer resigned and during the process of hiring a replacement we did little other than basic maintenance. One of the committee members had Dreamweaver installed on his computer and took care of the updating that needed to be done. Currently, USP is looking into Contents Management software for all departmental websites and the new analyst/programmer will need training in this area.

Another challenge relates to the use of the categories or headings as mentioned in Guideline 3. Librarians are notorious for the use of jargon (does a circulation desk actually circulate?) and it is a challenge to place information in a meaningful way to users. For example, many users can not find the Library Impact Statement which academics need to complete when proposing a new course. It is under Collection Development which may make sense to librarians but is not particularly intuitive to academic staff. Compounding this problem are the additional factors that our librarians come from a wide range of backgrounds and use different terminology and that for most of our students and staff, English is a second language or even third or more.

A larger challenge is to educate the campus community to use the website as a starting point. In many cases, for both students and academics, integration of the online catalogue, with databases, instructional materials and other website links is a new concept. We need to continually promote the website in all library promotional materials, instruction sessions and presentations.

Up until now the web committee has not formally evaluated the site to determine its usability. The Knowing Your Website Contest served as an informal evaluation in so far as users had to navigate the site in order to find the page where the answer was located (i.e. if no answers were received or none of those received were correct we would know we had failed somewhere). We have also encouraged feedback from library staff during the redesign process. However there is a need to conduct a survey among the different user groups as "There is only one sure-fire way of finding out what it is users want and what they expect from a website, and that is by asking them" (Good sites, good business 2004). When we do conduct a survey we will take into account the steps involved in evaluation as outlined by Davidsen and Yankee who emphasise the need to establish evaluation goals for every user group.

Future developments for the website include the creation of resource guides or pathfinders for the major subjects taught at USP. This project was initiated by the web committee in response to two areas that need updating: the library user guides and Recommended Internet Sites. The user guides are listed in the website but are not hyperlinked as they date from the mid-1990s and do not include online resources. The Recommended Internet Sites directs the user to a page compiled and maintained by the Emalus Campus Library. The web committee is keen to create its own page of links because the Emalus page is geared towards law. USP librarians recently agreed to be responsible for compiling one resource guide each. Although these guides will take time to prepare, in the long run we will be "able to point researchers to all relevant materials regardless of location on the web site… links can be made to items in the catalog, online databases, e-books, web sites…" (Wilson 2004).

As mentioned at the start of this paper, the library embarked on a digitization project in 2001. The main aim of the project is to make certain Pacific material available online to all its users. So far it has concentrated on scanning theses but delays have been caused by the lack of response from individual authors to a letter requesting permission to put their thesis online. Another setback has been the inability of the Library to hire a Digitisation Librarian since the post was first advertised in 2002. As all these pieces fall into place, access to online Pacific resources will have far reaching benefits for our users in remote areas.

There has been a call by library staff to incorporate some of the more interactive aspects of the web such as blogs and newsfeeds. As David Tebbutt argues, these technologies are "focused on information access and exchange" and "can be deployed to good effect both within and at the edge of your organisation". However the web committee would need to consider these "extras" carefully if it is to incorporate them as they require dedicated and committed staff to maintain them; in other words they may not be sustainable in the context of USP Library.

Looking forward, we have the framework in place to continue to add value to the site. With the guiding principles established, we can address these challenges and provide quality resources and services in an electronic environment.

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