PICA TO PIXEL: THE PRINT TO WEB TRANSFORMATION OF THE UBC ACADEMIC CALENDAR

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ABSTRACT

This project report details the period of time in which the UBC Academic Calendar was discontinued as a series of printed books. Following this change, as staff strove to implement improved full-service websites to publish this content, they began to consider how to make an online calendar that could evolve with web technology. This consideration resulted in the prioritization of workflow in order to improve the website's content, editorial process, navigation, and design. This report illuminates the differences of the online publication verses print models. To ensure a broad scope, the content is based largely on statements from personnel working for Enrolment Services as well as my own experience as an employee involved in the process for a period of eight years. It concludes with recommendations for best practices when updating online publications with legacy content.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. Introduction

This project report examines the methodology that was used to transform the content of a three-volume printed edition of The University of British Columbia's (UBC) Academic Calendar into content published on the web without a printed companion. While print and web editions (Vancouver, Okanagan, and graduate student editions) of the Calendar have co-existed since 1998, it was in 2008 that the UBC Registrar decreed that the hardcopy editions would no longer be produced.[1] While the cancellation of the print volumes was viewed as a necessary change in order to address sustainability and budget concerns, it was widely recognized that the existing web calendars were antiquated. These online publications required a refresh in order to serve as an adequate replacement to the print edition. The structure of the Calendar also required revisiting so that it could work for users over the long term.

While academics may be the intellectual head of a university, an academic calendar is the heart of these institutions. Universities are governed by a board of senators, and a core function of the Senate's responsibility is to *'to provide for the preparation and publication of a university Calendar'.* Without a calendar, a university cannot exist as a legal and governed body.[2] The Calendar holds the regulated information approved by the Senate. It pertains to the university's degrees and programs such as admission qualifications, course and program

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[1] Silzer, Brian. *Letter to the UBC Community*. Enrolment Services, The University of British Columbia. March 8, 2008. <http://www.students.ubc.ca/Calendar/download/PublicationFormat080318.pdf> Accessed May 9, 2009.

[2] "Chapter 468" <u>The University Act</u>. Victoria: The Queens' Printer, 1996. <http://www.bclaws.ca/Recon/document/freeside/--%20U%20--/University%20Act%20%20RSBC%201996%20%20c.%20468/00_96468_01.xml> Accessed May 5, 2009.

approval, and provisions around scholarships, faculties, and academic discipline. This material is supplemented with content such as course descriptions, facility descriptions, academic dress, and fees.

The University Act does not specify the medium in which a calendar should be published. From 1915 to 1997 the Vancouver Calendar (the edition of the Calendar that was dedicated to UBC's Point Grey campus) was published as a print edition. An excerpt focused on graduate students (the Graduate Student Calendar) appeared in the mid-1990s. In 1998, an online calendar was introduced as the 'Official UBC Calendar', while the Vancouver and Graduate print Calendars were seen as supplementary books with no legal authority.[3] The information contained in both of these documents was only updated once a year so the content could not be considered as current as the web Calendar. An additional UBC Okanagan Calendar was created in 2005 when UBC acquired a new campus in Kelowna, BC. While the quarterly released web version was cited as the official version, it was the annual print calendars that took up large swaths of production hours and remained the key focus of staff and audience feedback over the decade.

Much of the content in this report is derived from my experience working as the Senior Communications Designer with Communications Services at UBC. Communications Services, a department within Enrolment Services (otherwise known as the UBC Registrar's Office), is an in-house creative shop offering design, editorial, and web programming services for the Vice-President, Students portfolio (VPS). As the Senior Communications

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[3] James Kim, interview with Leanne Prain: June 12, 2009.

Designer, I was responsible for the project management and print production during seven annual Calendar print cycles (2000/01 – 2007/08). My role involved hiring the printer, planning the cover artwork, supervising layout and production staff, design, and coordinating tasks with editors and programmers. My experience includes the employment of four different editors for the Vancouver Calendar, rapid changes to calendar content, the creation of the Okanagan campus (UBC Okanagan or UBC O), the restructuring of the Graduate Calendar, and the first phase of development of the re-designed web Calendars.

Retiring the print edition meant that Enrolment Services needed to refine the online editions in order to make key information accessible to users. Ten years into the existence of the web calendars had taught UBC staff that a website is not an end product, but an ever-changing medium. UBC staff recognized that the content and architecture of the Academic Calendar websites (UBC Vancouver and Okanagan each have their own URL) must be re-configured in order to meet to current web standards. The web Calendar also needed to be flexible enough to meet potential format changes and technological improvements, both expected outcomes known to come about during long-term internet development. The Calendar development team had learned from past experience that the web could evolve quickly and there was a desire by all of the parties involved to create a product that would be able to advance with changes in web technology.

Enrolment Services staff were faced with the challenge of prioritizing the revision of the web Calendar with little time and resources. This issue is common among publishers who are confronted with legacy websites that house a large volume of reference material.

Similar to a dictionary or a style guide, the Calendar has components that require annual updating.[4] It also contains content that remains the same indefinitely. Like many older online documents, the UBC web Calendar began as a website structured more like a book than a website. This approach harks back to the time where the web was seen as a replacement for the printed tome rather than an animal of its own making.

A decade past its infancy, we know that the Internet and digital media are not yet mature. The medium could, however, be seen having the temperament of a teenager; it is much more clever and demanding than it was as a child. While these innovations may be exciting, they can also be frustrating. How does a publisher design for a medium without a sense of how it will behave in five years? What can be done to prepare for unforeseen specifications? For entities such as the UBC Calendar which are composed of a wealth of content, it is a daunting prospect. In website redevelopment, websites that possess small amounts of content are easier to adapt and to change. Large websites generally take longer to manipulate, edit, code, re-write, and re-structure. When a large group of stakeholders and moderate budgets can make reviving a large website all the more challenging. Adopting a flexible development process is the best approach to keep a website viable and adaptable to change. UBC strove to do this with the re-engineering of their web Calendars, despite limited time and resources.[5]

This report examines the implementation of what Enrolment Services (ES) staff call 'Phase One' – the re-engineering of the UBC Calendar as set out by the two ES departments

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4 Heidi Peterson, interview with Leanne Prain: June 12, 2009.
5 James Kim, interview with Leanne Prain: June 12, 2009.

responsible for publishing the project: Communications Services and Senate and Curriculum

Services. By using information gathered from meetings, interviews, reports, and studies; this

work report details the mechanics that were used to translate a large volume of content into

a website structure that would serve online users, both in present day scenarios and in the

future.

2. The Print Editions

In the 2008/09 school year, the UBC Academic Calendar was published as three printed and bound volumes (the Vancouver Calendar, the Okanagan Calendar, and the Graduate Calendar excerpt) and two websites (separate sites for UBC Vancouver and UBC Okanagan. Graduate information was held within the Vancouver site). These hardcopy books were the final copies printed by the university. It is evident why UBC choose to discontinue the printed edition when one explores the attributes of these print copies and the production methods that were required to make them.

Similar in appearance, dissimilar in content; the three printed Calendars shared the same production attributes. The design and paper selection created some coherence between the three publications but they were extremely different from one another in respect to content. Addressing a distinct portion of the university, each publication had a wide audience that not only consisted of students but also university senators, legal advisors, high school counselors, administrative staff, government, the general public, and student advisors. The demands of each of these groups, along with the size of each audience, resulted in three vastly different publications constrained by the same format. They were not a true series of books as the cover design may have lead users to believe.

The difference between the three calendars is exemplified by the divergent page count of each publication. At a bulky 704 pages, the Vancouver Calendar weighed in at the size of a metropolitan phone book. The oldest of the three publications, it had been

published by the university since 1916[6], and it held all of the information related to

Vancouver students. While it focused proportionately on undergraduate students, it also held

information related to tourism, research institutions, facilities, and fees.

The Graduate Studies Calendar was comprised of 240 pages on graduate courses and

program descriptions that were re-published from the Vancouver Calendar. Until 2003, it

had been published as a direct excerpt from the Vancouver Calendar, but in 2005 Enrolment

Services took a different approach. The header levels were re-arranged so that the chapter

would make sense as a book outside of the context of the Vancouver Calendar. A table of

contents (*See the Table of Contents in Figure 1*) and an index were included, and the information

that was specifically targeted graduate students such as research opportunities and campus

facilities was added to the Calendar.

Lastly, there was the slim 222 page Okanagan Calendar that was developed to

appease the newly formed UBC Okanagan (UBC O) campus. This Calendar focused strictly

on Kelowna-based undergraduates as graduate programs have not yet been developed for

the new campus (*See the Table of Contents in Figure 2*).

Since the mid-1970's, Communications Services (the department was named

Secretariat & Publications until 2000) was responsible for the production and design of the

print Calendar. Communications worked closely with Senate and Curriculum Services, the

publisher and content provider for the Calendar. As a conduit for the university Senate,

Senate and Curriculum Services is legally appointed as the secretariat to the Senate and

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[6] Gregg, Tara. "UBC Calendar 2003/04 Report," Communications Services, Enrolment Services, 8.

University President. Part of the department's mandate is to publish the Calendar which details the information of faculties, schools, course listings, pre-requisites, information on legal appeals, academic year listings, services, and facilities, among other information. From the perspective of the Secretariat, the university Calendar is not just an informational resource but a legal document representing the contractual relationship between the University and its students. It is this legal relationship that binds the university to produce a calendar, however it is also this legal relationship that limited the extent of how far the Calendar editors could go in reshaping and improving content.[7]

As the needs of students who use the Calendar as a reference tool and the audiences that use it for legal and administrative reference were so diverse, the print Calendars did not have one defined audience but many audiences. There were many discussions within the Calendar team as to which content should remain in the Calendar, and what content should be relegated to another publication. The need to reduce and focus content became a consistent theme as to how one would go about reducing the complex editorial and production demands of the Calendar.[8]

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[7] Heidi Peterson, interview with Leanne Prain: June 12, 2009.
[8] Gregg, "UBC Calendar 2003/04 Report," 8.

Table of Contents

Figure 1: *Table of Contents from the Vancouver Print Calendar 2008/09, 3.*

Table of Contents

Figure 2: *Table of Contents from the Okanagan Print Calendar 2008/09, 7.*

2.1 EDITORIAL WORKFLOW

The editorial workflow of the Calendars was complicated by the fact that there two editors managed separate calendar publishing processes, compounding that these books were not a true series and should not be considered as one. Heidi Peterson, the Calendar Coordinator, is responsible for the online Vancouver Calendar, and was responsible for the print editions of the Vancouver Calendar and Graduate Studies Calendar. The Okanagan Calendar is edited by Nathalie Bomberg who is responsible for the Okanagan online Calendar and was formerly responsible for the Okanagan print edition for the 2009-10 Academic Year. Each calendar, while using the same content transfer techniques, was edited independently.

Content for the print Calendars was stored in an application called WISe (an acronym for the Web Information System enterprise), which was a web interface to the Calendar databases (one for the Okanagan content and one for the Vancouver content). The editors accessed course content through two other systems: the Curriculum Management System (CMS) and the Java Evaluation Module (JEM). CMS and JEM were used to maintain course information such as titles, descriptions, credits, pre-requisites, and co-requisites. The Calendar editors, with the help of the Communications web programming staff imported CMS data into the Calendar database for presentation via the web or print. Additional content specific to the print Calendars (the table of contents, campus maps, diagrams, and a three-year Calendar) were archived by the design team in layout files and revised by the Calendar editors each year.

Although calendar content came from many sources, most editorial decisions were controlled by the UBC Senate[9]. The Calendar editors served as a conduit for Senate's directives. Faculties at UBC propose new courses, changes to degrees and programs, and other related material to the UBC Senate. Senate reviews this content quarterly and approves or denies it. The approval of senate works like that of a bill of Parliament, it cannot be reworded for clarity, as these edits could have legal consequence for the institution.

Rather than using paper drafts to proof their content, contacts viewed their content on the Draft Calendar, a test website. The Draft Calendar allowed the editors to make changes directly in the WISe database and share a URL with faculty contacts to review content before it becomes public. The value of this website was that both the Calendar editor and the proofing contact had a sense of what information was in the database which had been approved by Senate, and what would be included in the next Calendar release.

The Calendar had a rigorous schedule and often this schedule lead to mis-communication between the editors and their faculty contacts. Each quarterly Senate meeting would result in hundreds of approved curriculum proofs for the Calendar editor to check and enter. Often faculties would submit changes that had not been approved by the Senate to the editors, and then would not understand why these changes were not present in the online proofs that the editor has sent them for review. Other times, faculty contacts would forget that changes had been sent to their respective Senate and inquire as to why their old proposals were not on the website. With a wide variety of contacts at all levels of

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[9] Note: Each campus has its own Senate. There is also a 'Council of Senates' that looks after information that affects both the UBC Vancouver and UBC Okanagan Senates.

the university, it was difficult for the Calendar editors to maintain consistent communication a large group of stakeholders from across the university. Not only did they need to stay in contact with the faculty contacts that provided content for the calendar, but other groups who were also considered stakeholders as they had a vested interest in the Calendar content. This stakeholder group included students, faculty, prospective students, recruiters, high school and university counselors, librarians, alumni, and academic advisors.

As the Calendar website was updated multiple times of year and the print publication was updated only once, it was a challenge for content providers to understand when the content they had provided for the calendar would appear in a released version. Until 2009, once a year this material was 'captured' and downloaded into a print edition – this occurred in February of each year. Each quarter, the editors published content to the web but the timing of content was dependant on how quickly it had passed through the Senate approval process. For example, in the 2008/09 school year, the Vancouver web calendar was updated seven times:

UBC VANCOUVER CALENDAR VERSION RELEASES[10]	
1.0	17 March 2008
1.1	03 April 2008
1.2	30 April 2008
1.3	2 June 2008
1.4	27 June 2008
1.5	13 August 2008
1.6	25 September 2008
1.7	30 October 2008

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[10] Accessed from the UBC Vancouver Calendar webpage
<http://www.students.ubc.ca/calendar/archive/calendar0809/index.html> August 8, 2009.

Each of these updates occurred after the print Calendar had been sent off to press. When the recipients of the print Calendar received the hardcopies in mid-April, the web calendar had likely been through two rounds of revisions, with a third update following close after.

The same was true for the Okanagan Calendar which had four major update and a few minor releases to address corrections:

UBC OKANAGAN CALENDAR VERSION RELEASES[11]	
1.0	15 May 2008
1.1	12 June 2008
1.1.1	28 August 2008
1.1.2	24 September 2008
1.2	30 September 2008
1.3	17 October 2008
1.4	27 November 2008

Both online Calendars identified this information gap with a rider on the main page of the publication:

> *The Calendar is a comprehensive guide to all programs, courses and services available at the University of British Columbia. The Calendar also serves as a record of many University academic policies and procedures. The online Calendar is the official Calendar. Changes are incorporated online at intervals throughout the year.[12]*

While experiencing an era of massive change in publishing, there was still the prevalent attitude that what remains in print was more relevant and accurate than what was published online. For publishers using multiple media, it would be wise to determine what medium will

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[11] Accessed from the UBC Okanagan Calendar webpage
<http://okanagan.students.ubc.ca/calendar/archive/0809/index.html> August 8, 2009.
[12] Accessed from the UBC Vancouver Calendar webpage <http://www.students.ubc.ca/Calendar> June 7, 2009.

be 'official' and allocate the most resources to it. UBC had made the declaration that the web

calendars were the authoritative versions of the calendar. However, the resources that the

university continued to devote to producing the hardcopy Calendars drained resources from

web development and reflected poorly on the accuracy of all of the publications. A 2003

stakeholder survey revealed that content providers were concerned that the information in

the print Calendar was not accurate. Editorial and designs staff had concerns that they were

not given time to adequately proof pages or respond to last minute content submissions.

Each year, after the print Calendar came out, an erratum had to be produced to

correct printed errors. The chapters that were released last to production due to late Senate

approval often had the most errors. Web content could be corrected quickly but in print, the

error was permanent. UBC put some stop-gap measures in place to address this concern –

the editors ran disclaimers on pages of chapters whose content they could not guarantee. For

example: *Section 1.2 Course Drop/Withdrawal Dates* of *Chapter 1: Dates and Deadlines* had a

running header that said '*Note: Dates and deadlines are subject to change. Please check the unit in

question for updated information.*' Likewise, *Chapter II: Admissions* and *Chapter III: Fees, Financial

Assistance, and Scholarships* contained notes that mentioned that information was subject to

change and readers were referred to disclaimers at the beginning of these chapters. One had

to wonder what the first impression of a reader would be upon discovering these riders.

These riders were a band-aid solution introduced by the editors. Publishers need to be

certain of the value of publishing content that is not complete or deemed accurate. It would

have been prudent for UBC to focus resources simply on the web calendar after the results

of the 2003 survey[13] as too much effort was expended on refining the print documents.

Another reason to focus on one medium is allow an editor to ensure that all content

is given the same level of review. With the UBC Calendar content that was non-Senate

related was considered simpler in nature but these chapters received a more throughout

round of proofing than the others due to the fact that the editors could 'release' this content

to the production process earlier. While this was the most efficient manner in which the

editors could work under schedule restraints, it did result in an inconsistency in the quality of

content. Content which had passed through the system earlier was given a much more

rigorous edit than content that which came into the production process at a later stage.[14]

While publishing to print or to the web, a consistent voice and editorial eye is essential to

creating fluidity through a publication. This was something that the UBC Calendar editors

struggled with and the staggered edition process contributed to this problem.

2.2 DESIGN AND LAYOUT

In October 2000, I was hired by Publications to help lay out the university Calendar. The

hiring committee had hoped to find an incumbent who was experienced with Adobe

FrameMaker as the Calendar had been produced in this software for several years, but in the

hiring process they could not find anyone who was experienced with the software. I had

been trained in QuarkXPress, which was considered the premier software for page layout at

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13 Gregg, "UBC Calendar 2003/04 Report," 4.
14 Heidi Peterson, interview with Leanne Prain: June 12, 2009.

the time (Adobe InDesign had not cornered the market as it has today) so Enrolment

Services chose to switch the layout software QuarkXPress when I was hired. As

QuarkXPress did not cater the layout of long documents as FrameMaker had, the software

switch made the layout process more labour intensive than it had been in past years. Adobe

FrameMaker had the ability to publish simultaneously to print and web media, QuarkXPress

only could accommodate page layout at that time.

With no dedicated editor, just a work-study student hired part-time, the layout

process was haphazard. Everyone from the administrative assistant to the department

director checked the page proofs. The end product took five months to produce and the end

product was met with great dissatisfaction when the printed book arrived on campus after

the students had departed for the summer. While using QuarkXPress had been a familiar

tool for the design team, it was not the appropriate software for such a complicated

publishing process. A publication the size of the UBC Calendar demands technology that

will allow content to be pushed to several sources, rather than just be contained in a single

source. Publications resolved to do things differently the next year and staff were trained to

use Adobe FrameMaker as it was believed that it would expedite the layout process for both

the print Calendar and the website.

That next year James Kim, the web programmer, made some improvements to the

way that data was being stored for the Calendar. A new Access database was built which the

Calendar editor could access through WISe. Not only could this database be accessed

through a web browser but each field in the database was structured so that a computer

programmer could extract information and apply unique attributes (such as font size, appearance, and order) to discrete bits of content using code. This functionality allowed a programmer to take the information contained within the database and structure it not only for print layout but also web output. This was an important development in the Calendar process as it contributed to speed, customization of content, and the ability to make global changes in several mediums.

While the Calendar editor had the ability to enter content into a database for easy web publishing, this same information was also extracted from the database to be published in print. Using Adobe FrameMaker, the designer created style attributes (such as font size, weight, indentation, and leading) for each discrete bit of content. These styles, which included different attributes for headers, body copy, footnotes, and charts were housed within a FrameMaker template. The name of each style was passed onto James Kim, the web programmer, along with the style attributes which he replicated in the tags of MML code that he built. When Kim extracted the content from the Calendar database, he applied tags of MML code (a computer language similar to XML) around each database field tagged to correspond to a type of content (such as a header or a footnote). When an editor specified a text extraction, one of the web programmers would export this content from the database, and run this content through a series of MML code. This code would be flowed into the templates that the designers used in Adobe FrameMaker. As the document flowed into the template, font sizes and attributes would be applied to the text. The result of this conversion would be a chapter that could be passed to the designer almost fully formed. The design

team no longer needed to parse through every piece of content in the book and determine what styles to apply to each paragraph. This automated process was not only important for speed, but also accuracy.

The transfer of content into different mediums best serves publishers when content has been proofread, fact-checked and considered finalized. Unfortunately for the UBC Calendar, the transfer of content into print and web media occurred while content was still being edited. When content of the print Calendars was transferred out of the database into FrameMaker, it became a separate entity from the content of the web Calendar. Any edits made after this transfer in either media had to be corrected in both the web and print editions. This was not an efficient process and would often result in errors. It also duplicated the efforts of the editorial staff – they were editing in two places rather than one.

At first glance, the page layout resulting from a MML transfer would appear in suitable shape for publishing but the document would still required fine-tuning by a designer. In addition to checking the accuracy of the transfer, the designer had to build tables, fix widows and orphans, look for irregular flow of text, and tidy up the page.

While there has been much excitement in the publishing community around the idea of moving books online and into other digital media, publishing to content in multiple media is not simple. Before moving a project online, a publisher should determine if the content in a project has been organized in a method that will allow it to be sorted and edited for a variety of formats. Print and web content have different characteristics. Book content often does not read well on the web. Users expect to online information to be concise and easy to

19

scan. Print content often requires indexing, page numbering, and cross-referencing to be navigable. Databases that allow content to be suppressed or re-ordered provide more opportunities for content to be adjusted for digital outputs. Such tools allow publishers to have more flexibility and freedom to move and adjust content for output.

In the case of the UBC Calendar, a database had been used but the design team had to work with the editorial team to identify a larger hierarchy for the print editions than the web Calendar used. In order to make these pages easy to read and understand in print, it was determined that the print document required seven discrete levels of headings. This was a departure from the web edition that only recognized five levels of headings as the original data-entry only recognized five levels. If another level of hierarchy was required, the editors had the option of entering HTML tags into the database and create the illusion of a heading by applying bold or italic formatting to the text. In developing this work-around, it became obvious that the Calendar content published to the web and print was read differently in these two mediums. It is not that using two different technologies was incorrect. Difficulties with the media arose out of the fact that the content, and the decision-making processes surrounding this content, were not flexible enough to mold the content for the different media demands without hands-on labour from Communications staff.

Using a system that was so rigid also contributed to a reluctance to experiment with the system for fear that more complications would be introduced. The database-to-MML FrameMaker transfer was efficient but far from perfect. Each time the team decided to change the appearance of a style, mistakes would occur with the MML transfer. Occasionally

halfway through proofing the Calendar, a double paragraph or missing content would be discovered by the editors.[15] In addition, the courses section which was pulled from a separate database would often need to be extracted several times as the editors had to ensure the extract came complete. More often than not, the designer would begin to lay out the courses section and discover that it was missing pre-requisite codes or special characters. Since introducing new changes usually introduced new errors, the programming and design team became reluctant to make refinements. Staff often spent more times fixing errors than working on creating page proofs, and the technology taxed Communications Services' ability to focus on improvements.

While publishing simultaneously to print and the web seems like the ideal situation in order to reach all audiences, if the process is not efficient, the effort to produce work in multiple mediums can tax a publisher's resources. In the case of the Calendar website, content that was adjusted for print was not working on the web, and vice-versa. In fine-tuning content for one platform, difficulties were often introduced into the other platform. As the new publications of the Graduate Studies Calendar and the Okanagan Calendar came about Enrolment Services chose to build these calendars off of the existing framework of the Vancouver system, despite an awareness that this structure was not working efficiently for multiple media publishing. Publishers would be wise to examine the effectiveness of their current technologies before complicating their efforts by adding additional publications to their workflow.

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[15] Heidi Peterson, interview with Leanne Prain: June 12, 2009.

2.3 THE PROOFING PROCESS

The Calendar proofing process was a push-and-pull relationship between the editors' need

for accuracy and the designers' need for refinement. While this relationship is present in all

publishing endeavors, UBC would have benefited from some clarity as to how these two

functions should be prioritized by the publishing deadline. Late-breaking policy changes

would result in the design team altering pagination, tables, the index, and cross-references;

often under looming press dates. While the non-Senate related material in the Calendar

remained relatively the same from one publication cycle to the next, there were many

chapters that went through radical changes every year. Medicine, Dentistry, and Science were

not only the largest chapters in the Vancouver Calendar, but also they required the most

manual adjustment, and therefore more proofing. As these faculties had the bulk of

programs at the University, they were often passing curriculum changes through Senate right

through our print release deadlines. As the faculty information was Senate approved, there

was very little that the Calendar editors could do to clean up this information to make it

consistent with the rest of the book before it went to press. Heidi Peterson, the Vancouver

Calendar Editor, explained her process:

> …all courses, program details, dates and deadlines, admissions policy and dates, fees,
> policy and procedures, and establishment and constitution information [are] strongly
> related to Senate. These are all items that Senate has considered and approved….
>
> I edit these parts of the Calendar in different ways: I only touch course and program
> information when I have an approved change form in front of me (I never take my
> contact's word for it that something has 'been approved'). Other parts, such as policy
> and procedures, I edit in consultation with the Associate Registrar and University
> lawyers.

The content that was in the calendar had different levels of approval that created an inconsistent tone across the books. Adding last minute content also meant that the design team did not have time to refine the design and look for text re-flow. The editors would also occasionally have to provide changes to the designers without having the time to review these changes in layout. The struggle that the Calendar editors had at the end of the publishing process, speaks strongly to the fact that the scope of content that the Calendar covered should have been narrowed. If the editors had less content to review and vet, the process could have been manageable under the strict timelines that were afforded by the production process. Enrolment Services recognized that the print calendars contained a large amount of content, but not all of this content necessarily needed to be included in these publications. The non-Senate approved material could have been allocated to other university publications.

Last-minute content changes were also inherent in the publishing process of the UBC Okanagan Calendar. As a newly minted institution and new courses, departments, and even faculties were being formed during the first two print Calendar production cycles. Despite the fact that the institution was creating its academic and programming foundation, the Calendar editor still needed to forge ahead to ensure that a Calendar would be created for the opening of the new campus and she had to ensure that all of the essential information that students needed was included. This dilemma makes a good case for print being an awkward medium for the UBC Okanagan Calendar. Any publishing process that

does not allow an editor adequate time to proof and make material consistent is counterproductive to an authoritative document.

The Vancouver Calendar was traditionally laid out and printed between December and February of each year, with the Calendar going to press on the last day of the February. This put the delivery and billing into the end of UBC's fiscal year (March 31st), while allowing for the Calendar editor to reflect most major changes to courses and content for the following school year. As a stop-gap method the editors would review the layout proofs of individual chapters as if they were independent documents using the same style guide. On the first layout, the designers did not fix widows and orphans, as it was acknowledged by the whole team that this information would likely require new pagination after new content was added. The editors verified each draft with the help of a proofing checklist (*see Figure 3 a-d*) so that the editors could check what aspects of the project they should be reviewing at each stage of the editorial review. In using this method, the editors would know what sort of changes the chapter could accommodate without causing a major impact on the timelines.

The staggered production process worked well to economize staff time. Near the end of the Vancouver layout cycle, design staff members also worked on the layout of the Okanagan Calendar and the Graduate Calendar. With three calendars being produced at the same time, the team had to prioritize which content was laid out and reviewed first.

Once the Calendar editor had given a final sign off, a designer would generate a book file using Adobe FrameMaker. This file would order and automate tasks in a collection of

First Layout Proofing Checklist

○ **MML:** has the complete version come through? Confirm first and last paragraphs of import.

○ **Page numbers:** even number? consecutive? in proper places?

○ **Chapter titles:**
  ☐ single space between chapter number and chapter name
    (i.e., VI Services, Organizations, and Facilities)
  ☐ terminal comma used in chapter name
    (e.g., VI Services, Organizations, and Facilities)
  ☐ title case?
  ☐ correct title name?

○ **Footers and headers:** all correctly written and formatted?
  ☐ left hand page should read "pg#<3 spaces>THE UNIVERSITY OF BRITISH
    COLUMBIA | VANCOUVER<2 spaces>CALENDAR 2006/07
  ☐ right hand page should read: <CHAPTER NAME><2 spaces><SUBSECTION
    NAME if applicable><3 spaces>pg#

○ **Faculties Chapter (IX in Vancouver Calendar, VII in Okanagan Calendar)**
  ☐ correct section numbers next to titles?
  ☐ formatted properly?

○ **Header levels and text styles:** correct throughout, including tables?

○ **Superscripts:** pushed into the line or text above them? clearly visible?

○ **Tables:**
  ☐ if breaking over two columns, does it say "(Continued)" at top of
    second column?
  ☐ do they have correct titles?

○ **Academic Staff Lists:**
  ☐ names bolded?
  ☐ Dep't names are H4?
  ☐ staff titles are H5 (unless there is a 'Division' heading preceding, in which
    case they will be H6)?

○ **Style Guide:** obvious errors: i.e., enrolment, not enrollment?

○ **Quotemarks:** are all single and double quotemarks 'curly'?

○ **URLs and emails present?**

○ **Article ID numbers appearing in x-reference text?**

Proofer Initials ☐   Number of pages = ◯

Figure 3a: Vancouver Calendar Print Proofing Checklist – First Layout Proofing Checklist

Second Layout Proofing Checklist

○ **First Layout Proofing:** Changes made?

○ **Tables:** if breaking over two columns, does it say "(Continued)" at top of second column?

○ **Pages:** do all chapters have an even number of pages?

○ **Dashes:** all hyphens turned to en-dashes where applicable?
(i.e., en-dashes are used specifically in ranges (dates, times, course credits, addresses); hypens in phone numbers are correct)

○ **Ads:** placed accurately? has text shifted as a result?

○ **Widows or orphans?**

○ **Hyphenation:** correct? – pay attention to URLs especially

Proofer Initials ☐   Number of pages = ◯

Figure 3b: Vancouver Calendar Print Proofing Checklist – Second Layout Proofing Checklist

smaller FrameMaker files that were linked to it. This collection of linked files was what

FrameMaker called a 'book'. It was in the book-making process that FrameMaker proved to

be valuable. The software automatically re-numbered the pages within the document. It

generated a table of contents *(see Figures 1 and 2)* by seeking out content within the book that

had a header style applied to it. It would then populate the Table of Contents page with

these header names along with a corresponding page number. FrameMaker also allowed the

designers to generate cross-references and an index by using markers that the editor had

placed within the layout files. What had been a traditionally a laborious process was cut

down to a few hours of work due to FrameMaker's auto generation capabilities.

Final Layout Proofing Checklist

○ **Second Layout Proofing:** changes made?

○ **New problems:** text alteration resulting in poor hyphenation, widows, orphans?

○ **Page numbers:** do the page numbers follow correctly, chapter to chapter?

○ **Footers:** re-checked for correctness as per First Layout instructions?

○ **Chapters:** in correct sequence?

○ **Chapter titles and sections:** check against master list/index

○ **Table of Contents:** check against page numbers

○ **Index:** do random check against rest of book

○ **Scan entire book as a whole before sending to printer.**

Proofer Initials [ ]　　　　　Number of pages = ( )

Figure 3c: *Vancouver Calendar Print Proofing Checklist – Final Layout Proofing Checklist*

While FrameMaker was essential to automating the process of adding a comprehensive index and table of contents, a failing of the printed piece was that not searchable as a website could be. For those who were very familiar with the institution (for instance, advising level staff or faculty), most users could find their faculty and skim over the pages until they found the appropriate entry. For the rest of users, students and potential students, it was the index that was the key part of the book. While FrameMaker assisted with making these functions work well in the printed book, the functionality of the web could assist in searching books that had such broad content.

2.4 ALTERNATIVE FORMATS

Accompanying the print and web Calendars were PDFs of each chapter that had been generated from the layout files of the print Calendar. These PDFs posed advantages and disadvantages for the Calendar team.

Students were often ready to register while the print calendar was at press, so PDFs were considered a stop-gap measure during those times. However, while the PDFs had some handy features such as book marking, live web linking, and security settings; they served as only a snapshot of the printed piece. They could not be updated with content from new releases of the web calendar. This was because each of the layout files that the PDFs had been generated from would have required manual updates and the design team's time was allocated to other projects during the rest of the year. While it would have been ideal to update the PDFs on a quarterly basis, each of these updates would have required the same amount of work reserved for producing the annual print calendar.

The PDFs were easy for users to search. Using the 'find' command meant that a user could seek keywords from throughout the publication. This was not an action that users could perform with the older versions of the print or web versions of the calendar. In observing students and staff testing the web calendar, a few subjects stated that they relied solely on these PDFs. They did not use the navigation of the Calendar website. While the PDF format had served as a useful bridge between the technologies of the print and web calendars, they detracted from staff time spent on improving the web calendar.

Communications chose to abandon the PDFs when the print Calendar fell out of existence. As the Calendar websites continue to be improved, Communications Services is exploring the possibility of an online system that can generate PDFs for users on an

on-demand basis. This sort of system will allow users to have greater control over the content that they wish to download from the site.

2.5 ACKNOWLEDGING THE WEB IN PRINT CALENDAR

While the print Calendar was often seen as a stand-alone piece, Calendar staff made a concerted effort to ensure that users were well aware of the official web versions. The Calendar URL was printed on the front cover and the printed book was sprinkled URLs leading to applicable web pages. Despite this fact, many readers of the print Calendar did not visit the web. Several college and staff advisors reported that they had been so frustrated by the website that they had chosen not to return to it again. Such anecdotes may have contributed to the seeming demand for the print Calendar long beyond Enrolment Services' desire to cancel it.

3. The Dissolution of Print

By the 2008/09 school year, it had become obvious to Enrolment Services that this was the last time that the Calendar would be produced in printed format. Printing was no longer feasible due to reasons of limited resources, concerns about sustainability, and survey evidence of the limited audience engagement with the print Calendar.

3.1 FORMAT LIMITATIONS

From the late 1990's to the mid-2000's, UBC was rapidly expanding and adding new programs and courses. As a result, the print editions could not physically contain the volume of information required by an institution of such a size.

The page count of the Vancouver Calendar increased to 700 pages but faculties and the Registrar still requested that more content should be added to the Calendar. In order to accommodate the expansion of content, the design staff shrunk the typeface to the nearly illegible size of 5.5 points , they expanded the page grid, and they reduced the space between headers and footers. The commitment of time that it took to squeeze all of the required information into the book took away from the time that editors and designers could have used to review content for accuracy.

In 2004 Tara Gregg, the Calendar editor compiled a report of recommendations for the web and print Calendars.[16] In her findings, it was noted that all content providers had requested more time to proofread their areas of the publication. They asked for a published

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[16] Gregg, "UBC Calendar 2003/04 Report," 8.

agenda of drafts so that they would know when to request updates and submit new content

to the Calendar editor. Faculty and counselors also wanted verification of the release date of

the published calendars so that they knew that the information that they were providing to

students was correct. While Tara Gregg[17], a former Vancouver Calendar editor, identified

such requests in 2005, this type of feedback remained consistent with the Calendar

stakeholders until 2009.

When the decision to print a UBC Okanagan Calendar was confirmed by organizers

of the new campus, there was concern as to how Enrolment Services would be able to

produce three Calendars in the space of one year. Staff did not have the resources to lay out

two calendars at once. In actuality, the newly formed campus took much longer to develop

its course descriptions and program requirements, so in the first year, the Okanagan

Calendar followed a month later in production time. As the final bluelines were checked for

the Vancouver Calendar, the Okanagan Calendar chapters were in the early stages of layout.

The Graduate Studies Excerpt was laid out concurrently with the Okanagan Calendar. This

staggered approach made it impossible for the print Calendars to arrive at the same time on

campus. While the staff did the best it could to refine the publications as well as they could,

the web Calendars became somewhat ignored due to resource limitations.

3.2 MISSED OPPORTUNITY

In 2005, the newly founded Okanagan campus acquired its own calendar and calendar

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[17] Gregg, "UBC Calendar 2003/04 Report," 8.

editor. After much consultation, rather developing a new format for the Calendar that would be tailored for the UBC Okanagan specific content, the UBC Okanagan Calendar was shoe-horned into the same publication formats as the Vancouver and Graduate Calendars. Given that the new campus presented the opportunity to start programming anew, Enrolment Services hoped to not introduce a printed calendar to this campus. However, when the provincial government had sanctioned the transfer of the college campus to UBC, many of the new staff members and students that UBC inherited from Okanagan University College (OUC) had expressed their dissatisfaction. There were concerns that the local Kelowna culture would be lost as OUC became integrated into the larger UBC infrastructure. To resolve this issue, UBC directed that every opportunity to make these new UBC Okanagan employees feel welcome should be taken. As this audience expressed a strong allegiance to a printed calendar, Enrolment Services decided create a printed calendar to appease them. As the Okanagan Calendar needed to be created quickly, and much of the content was based off of the Vancouver Calendar curriculum, the web team at the time built the new Okanagan Calendar database from the structure of the online Vancouver database. It is ironic that offering a format that was considered more personable and meaningful to its audience meant that UBC had to take a step backwards in the Calendars' technological progression.

3.3 EXPENSE

Publishers should not print additional copies of a manuscript without being aware of what their inventory levels look like. This is true for backlist titles and for titles that are updated

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on an annual basis. Unfortunately, Enrolment Services had little information about their inventory levels or knowledge about what the demand was for their printed books. The front counter staff of Enrolment Services also sold print Calendars for a fee, but they had few hard numbers on how many were sold. Each year a bulk mail-out occurred from a mailing list that was maintained by the Calendar editors. The distribution list was out of date. As a result, there were large quantities of print Calendars left at the end of each school year.

Each year printing quantities were based on what had been left in inventory from the previous year. While the print runs of the Calendars were reduced based on estimates made from inventory levels, the cost per unit of each calendar continued to rise. The expense of mailing each calendar also increased, due to the expanding page count and rising shipping costs. Calendars were sold for $5.25 a book to students but many copies were given away for free to first year students, libraries, and high schools. The Calendar was not a cost-recovery project, and in an era where budgets became tighter and tighter – it was difficult to justify putting out a publication that lost money. The postal rates for mail order Calendars were increasingly expensive and they likely discouraged many potential readers from ordering print copies. To order a 2008/09 Academic Vancouver Calendar through the post, in Canada the cost was $16.15. International postal orders amounted to a whopping $32.30. It is easy to understand why readers were more likely to seek out the web Calendar, rather than pay exorbitant shipping rates and waiting weeks for the printed book to arrive on their doorstep.

3.4 STAGNANT INVENTORY

In 2004, the culture at UBC began to shift to having a focusing on sustainability. This focus

included the monitoring inventories of printed material, including the Calendar. The biggest

roadblock in creating a sustainable calendar was not the materials used in the printing

processes (Communications Services had switched to soy-based inks on newsprint

made of 100% post-consumer waste) but the amount of paper used to print so many pages,

compounded by the amount of copies that were needed to print to make the per unit

cost reasonable.

The Vancouver Calendar diminished from a print run of 50,000 copies in 2000 to a

print run of 13,000 copies in 2006. According to studies that were carried out by the

Calendar editors, the print run for the Vancouver Calendar could have been as low as 8,000

copies but due to cost efficiencies Communications chose to print 13,000 copies as the

printer would have likely produced an extra 4,000 copies in order to get the printing presses

rolling. The same scenario held true for the Okanagan Calendar. The first year of printing

the Calendar, UBC had produced 15,000 copies based on the campus population. For the

next two years 12,000 copies were printed although estimates showed that only 8,000 copies

were being picked up each year – however the cost difference of 4,000 copies was negligible.

For this reason, each year Communications Services held onto extra calendars, that they

hoped they would use but ultimately these Calendars were recycled. To print the Calendar

was to produce unwanted waste.

3.5 CONSULTATION

After five years of consideration, Brian Silzer, the Associate Vice-President and Registrar[18],
concluded that there was enough support across campus to discontinue producing the
printed Calendars. This was something that Enrolment Services had been trying to achieve
since 2000. While Registrar, he had conducted several consultations to find out whether or
not to Enrolment Services should stop printing the Calendar but it wasn't until 2008 that it
became obvious that the print copies were only serving a slim audience. A call for feedback
from the campus community resulted in little feedback, which was a drastic change from
previous consultations. There finally seemed to be an acceptance of the web as an
appropriate medium for publishing this official content. Staff members who had campaigned
for over a decade for the calendar to remain in print did not reply or request a print calendar.
While Communications had attempted to focus on a web-only calendar for quite some time,
there was a larger societal movement in 2008 towards the acceptance of digital content and
the reduction of printed books. In 2008, Oxford Press closed their Canadian dictionary
division[19], the iPod touch introduced e-books to a large audience[20], and daily newspapers
began to shut down due to reduced ad revenue[21]. Where there once seemed to be a choice

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[18] Note: Brian Silzer was Registrar between 2004 – 2009. He retired on June 30, 2009.

[19] Anon. "Oxford Closes Canadian Dictionary Division" Canwest News Service. (October 1, 2008).
<http://www2.canada.com/components/print.aspx?id=c74519ed-c8d5-4312-869b-af7508dd65cc>. Accessed
August 3, 2009.

[20] Natsch, Paul "iPhone/iPod Touch: The Ultimate E-book Reader," AtMac.org (October 17, 2008).
<http://atmac.org/iphoneipod-touch-the-ultimate-e-book-reader>. Accessed August 3, 2009.

[21] Pérez-Peña, Richard. "Papers Facing Worst Year for Ad Revenue" The New York Times (June 23, 2008).
<http://www.nytimes.com/2008/06/23/business/media/23paper.html?_r=2&adxnnl=1&oref=slogin&ref=
media&adxnnlx=1214813309-cb9ip1j4ekEQOSirvenWhg>. Accessed August 3, 2009.

between print and web, online content became the accepted norm in 2008. It was finally the perfect time for UBC to cancel the printed Calendars.

Silzer wrote a letter that addressed Enrolment Services' plan to focus exclusively on the web Calendars in future years. **(***See Brian Silzer's Letter to the Community, Figure 4***).** Public response to the letter was minimal. Of those responses that were received, the Calendar team came to several conclusions:[22]

1.) The printed books remained useful in advising sessions and when the university was facing a student appeal in a courtroom. While this feedback was noted, Enrolment Services expressed that these needs could be met by improving the web Calendar with the ability to be customized to a particular user who could bookmark and save their own selections of material.

2.) It was identified that not all prospective students have access to computers. However, in order to be a student at the UBC, one would need access to a computer to apply to the University and to register for courses. It was expected that prospective students who did not have Internet or computer access would diminish over time.

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[22] James Kim, interview with Leanne Prain: June 12, 2009.

THE UNIVERSITY OF BRITISH COLUMBIA

Enrolment Services
2016–1874 East Mall
Vancouver, BC Canada V1V 1V7
www.students.ubc.ca
okanagan.students.ubc.ca

March 18, 2008

To: The UBC Community
From: Brian J. Silzer, Associate Vice-President, Enrolment Services & Registrar
Re: Publication format for the UBC Calendar

As many of you already know, the web Calendar is the official version of the UBC Calendar. UBC first announced this in 1998, when we observed the beginning of a decline in the use of the printed book, paired with rapidly increasing user expectations about the availability and currency of electronic information.

As a supplement to the official web Calendar, Enrolment Services has continued to publish print versions of the three-volume UBC Calendar set: the Vancouver Calendar, the Graduate Calendar, and – since 2005 – the Okanagan Calendar. Use of the printed books continues to decrease. In 2003/04, 30,000 copies of the Vancouver Calendar were printed, for example, compared to the current print run of 12,000 copies of the 2008/09 Vancouver Calendar. As print runs shrink, the University loses some important economies of scale. We see a lower return on our investment of staff time to prepare the book for printing, as well as higher per-unit printing costs. Although we try our best to estimate user demand to avoid unnecessary waste, every year we still send thousands of unused print Calendars for recycling.

A vast majority of student, faculty, and staff users now opt for the web Calendar. These users tell us in no uncertain terms that there is room for improvement with respect to the web Calendar, and we agree. Progress in this area has been impeded, however, because of the need to derive print and online content from a single data source. Were we able to focus our limited resources on the web version, significant enhancements would be easier to accomplish, including improvements to browsing, searching, organization, and user customization.

Given the above, it is our intent to focus exclusively on the web Calendar in future years. The 2008/09 Calendar will therefore be the last one available in both print and web formats. We believe this to be the right thing to do to better meet user needs, as well to contribute to the budgetary and environmental sustainability of the University.

We value your comments and questions about the transition to a single electronic format for the Calendar. **Please send written submissions to calendar.format@ubc.ca by June 30, 2008.**

Yours truly,

Brian J. Silzer
Associate Vice-President, Enrolment Services & Registrar

Figure 4: *Registrar Brian Silzer's letter to the community*

3.) Many of those who had been in favour of a print calendar justified this need by stating that a printed Calendar was required for archival purposes. This was untrue. The online Calendar had been digitally archived since 1998/99.[23] UBC Archives had also scanned printed Calendars from the first in 1915 and onwards. These scans are held in the Archives online repository.

4.) It was suggested by several groups that Enrolment Services should still produce a small number of printed copies and make them available on a cost-recovery basis. Enrolment Services determined that printing a small number of copies would prove prohibitively expensive.

The results of the Registrar's survey were telling. It was obvious that the web Calendar needed to improve in order to attract more readers and retain their trust.[24] The print-on-demand request was one that was dismissed due to cost, however, it is disappointing that the solution was simply to stop printing. Rather than approach the issue by deciding that these hardcopies remain in the same format as the previous print Calendar, the Calendar team could have looked into some of the most recent print-on-demand alternatives, such as Lightening Source or Blurb. These companies may have been able to help produce a limited number of copies at a reduced printing expense. While the labour costs for pre-press and

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[23] Note: (The Vancouver Calendar Archive can be accessed at http://www.students.ubc.ca/calendar/archive/index.cfm. The Okanagan Calendar Archive can be accessed at http://okanagan.students.ubc.ca/calendar/archive/index.cfm)

[24] James Kim, interview with Leanne Prain: June 12, 2009.

design may remain part of the print-on-demand process, the technology for generating PDFs

on the fly from the web may mean that Communications may have the ability in the future

to generate a high resolution PDF of the calendar that could be submitted to one of these

print-on-demand sources.

With the confidence that the majority of the issues raised by the survey could be

handled by an improved online Calendar, Enrolment Services moved towards this goal.

While not all of the concerns that had been raised could be addressed immediately, the team

showed a strong commitment[25] to examine what action could be taken quickly in order to

meet the 2009 release date of the web Calendars.

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[25] James Kim, interview with Leanne Prain: June 12, 2009.

4. Upgrading the Web Calendars

4.1 AN OVERVIEW OF THE WEB CALENDARS

In the mid 1990's, the Vancouver Calendar (both web and print) was maintained and produced by using a combination of programs: FrameMaker, Adobe PageMaker, and WebWorks Publisher. With this combination of software, a minor content change would require the rebuilding of the entire Calendar online and in the print.

In 2000, it was recognized that the current method was not serving the demands of the publication. In 2001/02, James Kim, the web programmer, migrated the content that was held in the old system to a Microsoft Access database. This new database served two purposes. One: changes could be made in a more efficient manner without reconstructing the web Calendar (*http://www.students.ubc.ca/calendar*); and two, the information was re-structured so that it could be available for export for a variety of purposes. By using MML code to export the database content to FrameMaker, the content could be used for page layout or to create a query for web output. This development meant that a database schema (the structure supported by the database management system which defines tables, table fields, and the relationship between the two[26]) was able to reflect the various types of content within the Calendar.

Prior to the Access database development, FrameMaker served the function of being a warehouse for content so that it could be exported to print and the web. After the database

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[26] "Database Schema," Wikipedia. <http://en.wikipedia.org/wiki/Database_schema,> Accessed on June 13, 2009.

was created, FrameMaker was simply a conduit for information which was received in MML format and imported into templates structured for print. The database was an important tool for having a centralized source where content could be updated.[27] It also had the advantage of being accessible through a web browser whereas the old system had required a desktop application. The advantage this presented was that information could be entered into the system by more than one person at one time.

The UBC Okanagan Calendar (*http://okanagan.students.ubc.ca/calendar*) was established in 2005 and a second database was created. The Access databases were then migrated to MySQL for the 2006/07 Calendars. This new system, which was still in use in 2009, provided a more robust and responsive framework than that which had been supplied by its predecessors. While the Vancouver and Okanagan Calendars are separate databases, they share a common database schema. This schema allows the web programmers to use a shared library for output to each Calendar. This shared output lessens the amount of duplicate code within each Calendar, and allows the programmers to develop global changes for both publications simultaneously.[28] The implementation of such a tool is a convenient example of how database technology can work for publishers.

4.2 THE WEB CALENDARS IN 2009

UBC is home to one of the largest wireless networks in North America. New libraries and informal study spaces have been designed for students who use laptops. UBC staff have the

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[27] James Kim, interview with Leanne Prain: June 12, 2009.
[28] James Kim, interview with Leanne Prain: June 12, 2009.

ability to work remotely – accessing servers and free Internet from home. This

technologically advanced environment indicates that every staff member and student should

be able to find the University's core information – such as tuition fees, registration dates,

and course descriptions; all information contained within the Calendar – without leaving

their computers.

In the late 1990's, Enrolment Services demonstrated educational leadership by

producing one of the first online university Calendars.[29] These were the early days of the web

when few students were online but UBC saw the value in providing students the option to

view their content on the web.[30]

While Internet access has only been popular in homes since the late 1990s, public

expectations regarding website quality has exceeded many organizations' abilities to keep up

with technological change. In 1999 it was often enough to simply have a web presence. In

2008 – with the advent of social networks, iphones, wireless connectivity, and web 2.0 –

UBC's online Calendar was not up to the standards of an institution that embraced

technology. As a result of the limited resources that the Calendar publishing team were able

to devote to the online Calendar and the vast amount of information that needed to be

published within it; the UBC Calendar website had become out of date. Websites are best

maintained as one might view building facilities – what was once great will eventually need a

structural and cosmetic upgrade. The print Calendars had been an all-consuming resource

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[29] Ivan, Stephanie. *ARUCC Calendars in Canada's Universities and Colleges: A Study of the Purpose and User Needs*
(Conducted Fall 2005), 1. Note: the ARUCC study notes that UBC is still a leader in this sense.
[30] James Kim, interview with Leanne Prain: June 12, 2009.

that detracted from web development. As noted by Vancouver Calendar Coordinator,

Heidi Peterson:

> … the biggest challenge for everyone on the team in regard to development is our lack of time and resources to this end. We can dream big, but the reality is that the tech team has limited time to devote to the online Calendar in its present form. We are looking at some enormous changes in the future (the Kuali project) that will really change the way we approach the material in the Calendar. The amount of time the tech team needs to spend developing the 'next big thing' means that we do not have as much time available for improving the current Calendar (Heidi Peterson, interview with Leanne Prain, June 12, 2009).

The Calendar, although important within the organization, represented only a fraction of the

business to which staff needed to devote themselves. Much like an independent publisher,

the resources that Enrolment Services had to devote to such a project were slim.

Using feedback gathered from a wide variety of users, the Calendar team began to

plan how the web Calendar could be improved in 2008. They identified a narrow but

achievable focus, which Registrar Brian Silzer outlined in his March 18, 2008 letter to

readers:[31]

> A vast majority of student, faculty, and staff users now opt for the web Calendar. These users tell us in no uncertain terms that there is room for improvement with respect to the web Calendar, and we agree. Progress in this area has been impeded, however, because of the need to derive print and online content from a single data source. Were we able to focus our limited resources on the web version, significant enhancements would be easier to accomplish, including improvements to browsing, searching, organization, and user customization.

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[31] Note: To read the entire letter, see *Figure 4*.

4.3 USER TESTING

Recognizing that the current web Calendar needed improvement, James Kim, now the

Director of Communications Services, requested that the testing of the Calendar be a

priority for Communications Services in 2008.

Over the summer, Claire Moller, Communications' User Experience Architect,

conducted a web Calendar study[32]. With the goal of identifying the issues that Calendar users

often faced, she conducted 25 in-person interviews at UBC Vancouver, UBC Okanagan, and

local high school and transfer colleges. The interviews consisted of two parts: general

questions about the Calendars and a series of tasks to determine the usability of different

website functions.[33]

Moller's work addressed a broad sample of Calendar stakeholders. These groups

included grad students, faculty, transfer students, prospective students, recruiters, front

counter/informational staff, UBC advisors, administrative staff, current students, guidance

counselors, college advisors, and staff members of Senate and Curriculum. The tests that she

gave consisted of a 45-minute interview and each participant was asked to perform a series

of actions using the web Calendar. The duration of each task was recorded was along with

the amount of mouse use required to achieve the task.[34] During four of these sessions I

observed participants bring out their printed Calendars which were marked with highlighting

and post-it notes. These users showed an attachment to the printed Calendar. They often did

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[32] Moller, Claire. *Web Calendar Study* Communications Services, The University of British Columbia. (December 2008) 1.

[33] Moller. *Web Calendar Study,* 1.

[34] Moller. *Web Calendar Study,* 2.

not trust the web calendar as a source that would provide them with the information that they sought. A community college counselor who advised students about UBC transfer credits admitted that she only used the print Calendar. She used the web Calendar as a means to download the Calendar PDFs. She did not seem to be aware the advising information that she was offering her student was out of date, even though the webpage that she downloaded her PDF from clearly stated that the PDFs was only updated once a year. Communication Services had published advisories about quarterly releases of the Calendar, but it was clear that users were not receiving this information. This problem was likely compounded by the fact that there was no annual agenda for these updates, updates happened when production schedules would allow them to occur.

Further observation showed that often users struggled with the homepage (*see Figures 5a and 5b*).[35] The most common barrier to the web is that users behave differently online. They do not read, but they scan, scroll and click around.[36] Some of the users that Moller tested did not use the website navigation, they only used the Calendar search function. They typed the keyword that they assumed would fit their query the best into the website's search box. Often this search would yield a variety of hits from within the Calendar website, which were often far from the user's desired results. These participants would scroll through an average of fifty entries until they found one seemed to be related to their query.

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[35] Moller. *Web Calendar Study,* 4.
[36] McGovern, Gerry and Rob Norton and Catherine O'Dowd. *The Web Content Style Guide.* (London: Prentice Educational Ltd, 2002) 1.
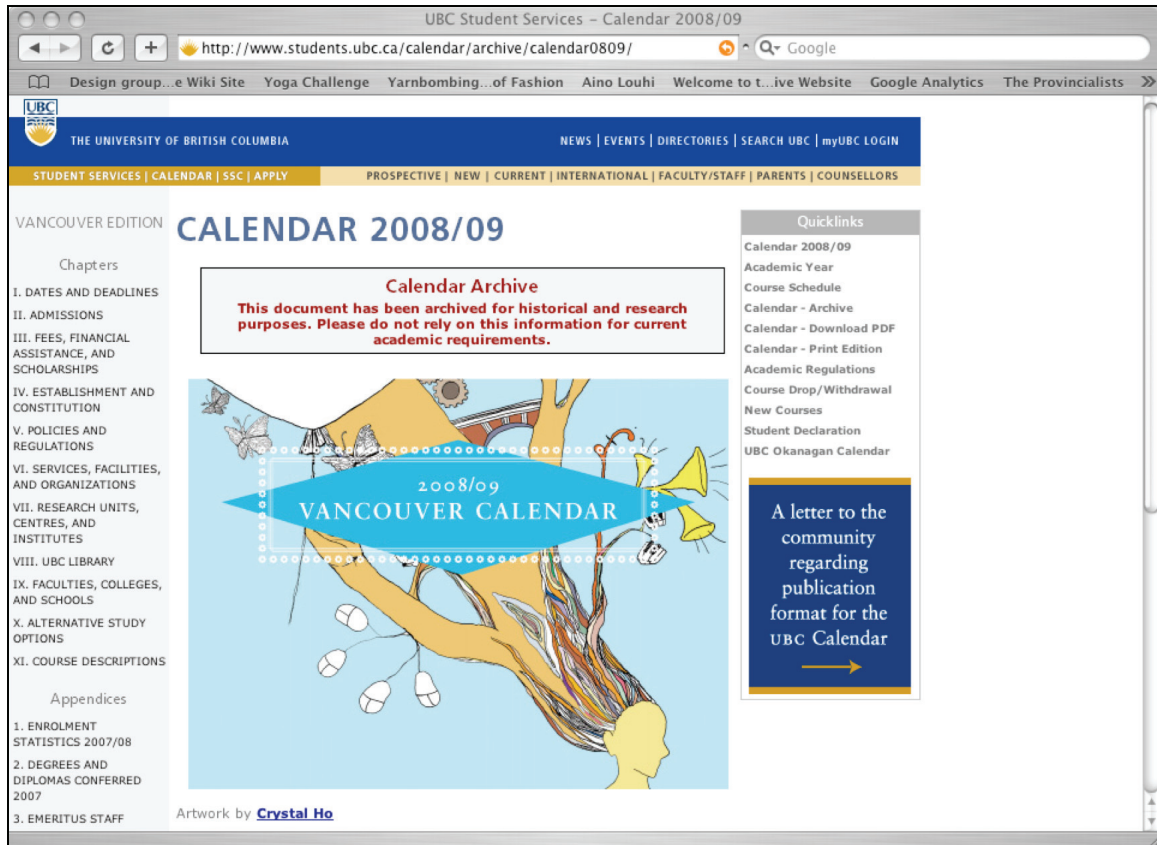
Figure 5a: *Vancouver Web Calendar 2008/09 Homepage*

Sometimes this task could take over three minutes which not an ideal result for someone in

an advising position.[37]

Here are two of the comments participants made during the interviews that echo the

overall sentiment of the user interviews:

"If I can't find it, and I navigate to this website every day, I think it would be pretty
frustrating for a student"
– UBC advisor

"If you don't know where you're going, the online Calendar is impossible to use
from our perspective"

– UBC staff member

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[37] Moller. *Web Calendar Study,* 1.
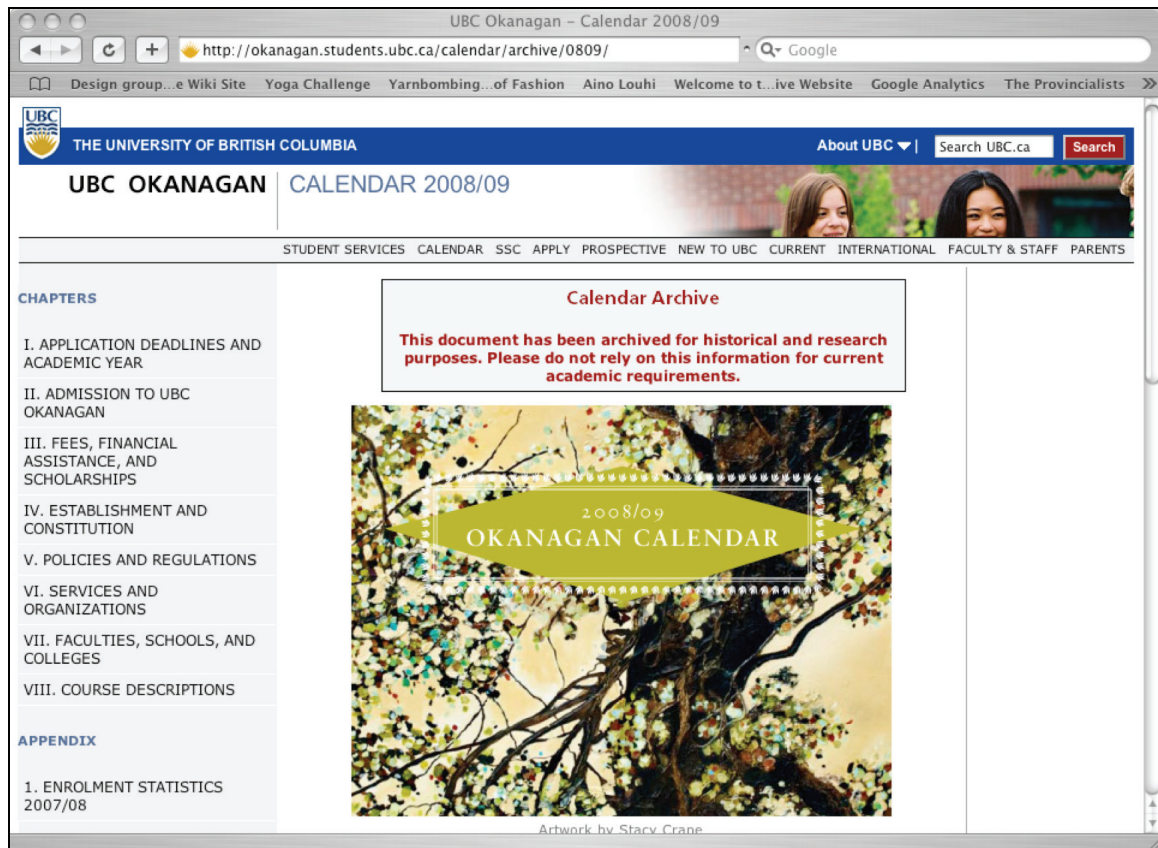
Figure 5b: *Okanagan Web Calendar 2008/09 Homepage*

Users did note some positive attributes of the Calendar websites: the ability to email themselves content, the ability to bookmark pages, and the ability to print pages. The feature most requested by users was a date stamp for each page that would declare the last update.

An over-arching perception of the user interviews was that the print Calendar was expensive to update but the web was easy and efficient to update. Users displayed more patience with waiting for updates in the print versions but expected updates to the web to occur instantaneously. The web Calendar was not this flexible. Despite the accelerated publishing method of the web, content changes could not occur as efficiently as users would

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expect. The accuracy of calendar content was reliant on contributors providing information in a timely manner and the passing of this information through Senate approval. The Calendar editors' roles involved just as much coordination as they had with the printed calendars.

In the 2007 *The Web Calendar Study*[38] Moller outlined a variety of improvements to the website to enhance its use. Her recommendations are summarized here with a primary focus on user experience and the desire to find relevant information for the users, disregarding what the universities priorities (such as Senate-related content and non-Senate related content) were in the publishing process.

4.3.1 Language and Labels

Moller recommended four actions focused on language and labels as follows:[39]

1. An additional study should be focused on labeling and navigation within the Calendar;

2. Research should be conducted to determine the efficacy of hiring a plain language[40] editor for the Calendar;

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[38] Moller, Claire. *A Survey of Printed and Online Calendars at Competing Institutions.* Communications Services, The University of British Columbia (2007), 4.
[39] Moller. *Web Calendar Study,* 4.
[40] Note: For a full explanation of Plain Language, see *Putting Plain Language into Practice*, NWT Literacy Council, May 2000 <http://www.plainlanguage.gov>.

3. There should be an assessment as to how receptive faculty contacts and other information contributors are to working with the Calendar editors to make changes to structure and content

4. A pilot program should be implemented of plain language revisions for the non-Senate approved material.

4.3.2 Search

"Search results very difficult to read: keywords not highlighted; titles are [not distinct] Users can't find what they're looking for in the search results even when they are there."[41]

To increase user effectiveness in searching, Moller recommended making the search function accessible from every calendar page. There needed to be clear articulation that the search function pertains only to the content on the Calendar website but not other UBC websites.[42] She recommended that search results include short and direct titles and that these titles would highlight keywords found in excerpts and descriptions.[43]This is valuable advice as studies have shown that those who use search engines tend to only type in only a few words, rather than a whole phrase.[44] Other publishers on the web would do well to examine how headings in their print documents may translate to the behaviors of a website.

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[41] Moller. *Web Calendar Study,* 2.
[42] Moller. *Web Calendar Study,* 3.
[43] Moller. *Web Calendar Study,* 3.
[44] McGovern. *The Web Content Style Guide*, 6.

4.3.3 Readability and Information Design

"User expresses frustration with readability: wants larger font, wants less text; finds menu difficult to read."[45]

In response to this observation, Moller developed seventeen different recommendations regarding readability and information design. Users identified this area of the Calendar as needing the greatest amount of improvement. Among her suggestions, Moller recommended 'webifying' calendar copy, by making paragraphs into bulleted lists or tables.[46] When web readers approach a calendar page, they look at heading and subheads first. They look for bullets and small bits of content they can scan second.[47] The addition of sub headings could be added to allow the user to skim the text and to allow search engines to index the Calendar site.

Readability could also be improved by simple design adjustments. Web content demands that information is presented in an organized manner.[48] Moller had several suggestions to improve the design of the Calendar. She suggested using additional colours, a standardized design for breadcrumbs (the navigational links that let users know how far down they had drilled into the website architecture), and the minimizing navigational choices.[49] In short, she requested a re-design that would update the Calendar website and allow it conform to current web conventions. The web pages of the entire Calendar needed to conform to a standard pixel width: 1024 pixels by 768 pixels. Until 2009 the front page of

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[45] Moller. *Web Calendar Study,* 6.
[46] Moller. *Web Calendar Study,* 6.
[47] McGovern. *The Web Content Style Guide,* 1
[48] McGovern. *The Web Content Style Guide,* p. 20
[49] Moller. *Web Calendar Study,* 6.

the Calendar had no functionality and required users with small monitors to scroll down to see the site content (*see Figures 5a and b*).

To address structural changes, Moller suggested that information could be reorganized so that all webpages revealed their specific context within the larger body of information of the Calendar. For example, a webpage containing information for credit requirements for a third year history major should also link to the university's credit requirements for pre-major credits of first and second year. The former web calendar did not do this. Creating additional links between pages with related content would create a better context for users.[50] Moller also recommended creating an A-Z index of all content within the site, so users could use this to search and navigate. The homepages could also be restructured meet audience expectations and, ideally, highlight content trends. Moller suggested that certain content could be highlighted at key times of the year (such as admission content in the spring or registration content in late summer).[51]

4.3.4 Information Accuracy

It is important to readers that material presented in a publishing effort appears accurate. While the Calendar editors often explained the Senates' content verification process and its importance in the Calendar publishing process to Faculty contacts, they often struggled with a constant wave of new employees who were unfamiliar with this process and were confused to why their most recent submission had not been included in the Calendar. Often the lack

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50 Moller. *Web Calendar Study,* 6.
51 Moller. *Web Calendar Study,* 6. Please note: this remark only applied to the UBC Okanagan Calendar.

of knowledge about this process reflected poorly on perceived accuracy of the Calendars and the work of the editors. The editors often encountered contacts with concerns about the accuracy of their calendar.

While the editors were already following up on user concerns on a case-by-case basis, there was a need to broadcast that the editors were available to talk to contacts and walk them through the publishing process. The Calendar team identified a plan to inform content providers that their feedback was valuable and that the Calendar editors were available to listen to their concerns. The Calendar publisher saw this initiative as a way of achieving buy-in from these participants, particularly those at UBC Okanagan the campus that frequently raised concerns about content accuracy.

The wariness of the Okanagan Calendar content providers was similar to what Peterson had initially experienced with her faculty contacts in Vancouver prior to forging personal relationships with them. She said, "I used to deal with feedback from confused clients who would be concerned that the print version was out of date, who would fax me 'ancient' material for revision. I am hopeful that we will see a somewhat more sophisticated appreciation of the online Calendar as time goes by".[52]

The new online Calendar would change the proofing process so that faculty contacts could be certain that they were checking the most recent version of the information in the Calendar, eliminating confusion over the latest draft. Moller contributed a valuable technical solution that would assist in correcting the mis-perception of stakeholders and maligned

[52] Heidi Peterson, interview with Leanne Prain: June 12, 2009.

calendar proofs: she recommended that an identifier be added to each Calendar page that specified the last update. I believe that this addition to the web calendar and its proofing process would result in building the trust of all stakeholders in the accuracy of the online Calendars.

4.4 REVITALIZING THE WEB CALENDAR

In 2008, The Calendar development team was challenged to prioritize how to best improve the web Calendar in order to meet a winter release of a web Calendar. They met to discuss priorities and arrived with some shared questions. What were the most important elements of an improved web Calendar? What would make the largest impact? What could be genuinely improved with a small allocation of funds and resources in time for the new school year?

Ultimately, decisions came down to what could be accomplished in the short three months between the planning meeting and the launch of the first web only Calendars in February. The three deciding factors were resources, finance, and staff availability. These factors guided the extent of what could be implemented in 'Phase One' of a redesign, and what would have to wait for 'Phase 2' and 'Phase 3'.[53]

Communications Services and Senate and Curriculum Services used Moller's recommendations in order to determine next steps. It was decided that the Calendars needed the most improvement in the areas of: labeling and language, search functions, readability,

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[53] Prain. *Minutes from the 2008.09 Academic Calendar Retreat*, 2.

information design, accuracy of information, and the redevelopment of WISe.[54] While this report will not address strategies for each of these elements, it provides a broad overview of the key discussions on navigational structure, language, and usability.

4.4.1 Navigation

The navigational structure is a key element of information design that publishers need to consider when upgrading a website.[55] At the time of Moller's Study, both of the UBC web Calendars had resembled printed books rather than websites, which meant that they also lacked the ability to be searched easily. Where a printed book has an advantage of being easier for readers to scan, the web reading experience demands that content be reduced and formatted for the screen. Web search engines require content to be structured with headings. Website content should be arranged to work for Search Engine Optimization (SEO). These requirements, coupled with the impatient nature of how people surf the web, demonstrates that the navigational structure of a website works differently from a book. A website can conceal content. While website structure can be explained by sitemaps and tree structures, there is no reason for a user to assume that content ends at a given place. In a content-rich website like the Calendar website, clear navigation and labels are exceedingly important in helping users find their way.

Like most websites built in the early days of the web, the web Calendar navigation was on the left hand side of the screen. In this navigation user was confronted with the

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[54] Moller. *Web Calendar Study,* 7.
[55] James Kim, interview with Leanne Prain: June 12, 2009.

names of the Chapter Titles as taken from the printed book, such as: *I. Dates and Deadlines* and *II. Admissions (see Figures 1 and 2 for the entire list of chapter titles, and see Figures5a and 5b to see how this translated to the website Calendars).* Rather than labeling the website structure with titles from printed calendar, the Calendar team should have focused on naming these links by subject matter. This would assist users as they navigated the site. For example, rather than hiding the sections of the website that listed the Contact Directory for the campus under the title 'VI Services, Facilities, and Organizations', this information could have been labeled with the 'Directory'.

The web Calendar was not intuitive for users that were inexperienced with the institution. To access and understand the structure of the online Calendar prior to 2009, one had to know how the print Calendars functioned. A user needed to know what the chapter names meant (such as *II. Admissions* or *IV. Establishment and Constitution*) and what sort of content they would find within such broad titles. If a counselor were looking for credit values for an undergraduate major, he or she needed to have enough knowledge of the university to know to seek this information out from *IX. Faculties and Schools*. For new staff within the university the structure was not intuitive or well received.[56]

A website must be usable without requiring reference material. In the early days of web publishing, it was common for websites to be treated like books. The web is now populated with out-of-date websites that had been composed to work like printed books. On such sites website navigation is often labeled chapter titles. The texts are lengthy. There

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[56] Heidi Peterson, interview with Leanne Prain: June 12, 2009.

tends to be little consideration of the dynamic, interactive nature of the web. UBC is not the only publisher with legacy web content that should be reviewed for online suitability. When redesigning a website, publishers must think of these sites as websites, any reference to a printed book is unnecessary. With legacy or historical documents, publishers who are caught up in what content used to be like in print will not serve the contemporary needs of the content on the web.

4.4.2 Language and Labels

Moller's recommendation to hire a plain language editor for the Calendar was met with varying opinions. Lisa Collins, Associate Registrar and Director of Senate and Curriculum Services, expressed the concern that the content of the Calendar has legal implications, and the smallest of word changes could affect policy and prior cases of academic appeals. Where plain language integrated into the parts of the Calendar that the editors had freedom to reword, the Senate-approved material, could not be reworked as such edits would require another pass of the material through the curriculum approval process with the University Senate. There was also the concern that the content providers would not be receptive to the skills of a plain language editor because they had spent a great deal of time honing their descriptions within their faculties. If the faculties did not buy into the idea, a plain language editor would not be able to make sufficient progress with re-shaping Calendar content. It was determined that an assessment would have to be made to determine of how receptive of the content providers would be in working with such an editor before one was hired. The

Calendar development team would also need to have specific metrics articulated upon hiring so that they could evaluate the success of the venture. For example, metrics could include goals such as an increased web Calendar audience, an analytical measurement of the search function being used less often, and reduced in-person visits to faculty advisors. Another one of Moller's key recommendations was to create a study on plain language to see if there was a way of creating self-explanatory labels within the Calendar, thereby testing if the Calendar content was more intuitive to users.

While the working group agreed that plain language principles could be helpful, there was a concern that the language of a university should not be 'dumbed down'. However, on the side of Moller's recommendation, the attitude towards simple language has changed considerably as the web becomes more established. There may also be a place for plain language in the modern-day post-secondary setting. Feedback from high school counselors confirmed that many students and their parents (often the ones who really made recruitment decisions) were not familiar with the terminology of the institution.[57] This is particularly true with international students or new Canadians who use English as a second language. However applying plain language techniques to only small parts of a publication seemed to be a contradictory notion to using consistent language throughout the entire publication. By making the experience of language and fact consistent to readers and providing the content in each chapter of equal value, UBC had the opportunity to establish the trust of users, much

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[57] *ARUCC study*, 10.

more so than if plain language techniques had been applied to the Calendar in bits and pieces.

By the February 2009 web Calendar release (See Figures 6a and 6b, the Enrolment Services staff began to think of calendar content more often as web content. Whenever possible, they split the content into paragraphs and tables. They also populated the text with headers as this made the copy more accessible for search engines.

Web content has evolved from being text that is simply online to text that has certain attributes which makes it appropriate for reading on screen. It was recognized early on that while having content online was the first step in web publishing. Online content, unlike that on the printed page, is more accessible when it is 'chunked' or produced in small paragraphs that are easy to scan with the eye.

While the Calendar team could not agree to hire a plain language editor, it was suggested that a pilot project be undertaken using the non-Senate material within the publication. Peterson volunteered to assume responsibility for the plain language parts of the Vancouver Calendar prior to the launch in February. She revamped parts of *VI. Services, Facilities, and Organizations* section and VII. *Research Units, Centres, and Institutes*. An overhaul of *Spaces and Places,* a sub-section of Chapter VII, received some positive feedback from a faculty contact but overall she had little response from her content providers. Given this experience, she did not believe that the entire Calendar should be overhauled in plain language:

I don't believe it is either possible or desirable to convert the entire Calendar into plain language. There is an issue of sheer volume of Senate-approved material, which would have to be approved. To give you an idea of the proportion of Senate-approved versus non-approved material: the 2008/09 Calendar contains 65 pages of strictly non-Senate approved material, and the remaining 605 pages are combined Senate-approved material and non-approved material.

Peterson had hoped to undergo the same simplification process to the Units and Institutions portion of the site, but as of April 2009 had not gotten any buy-in from her faculty contacts.[58]
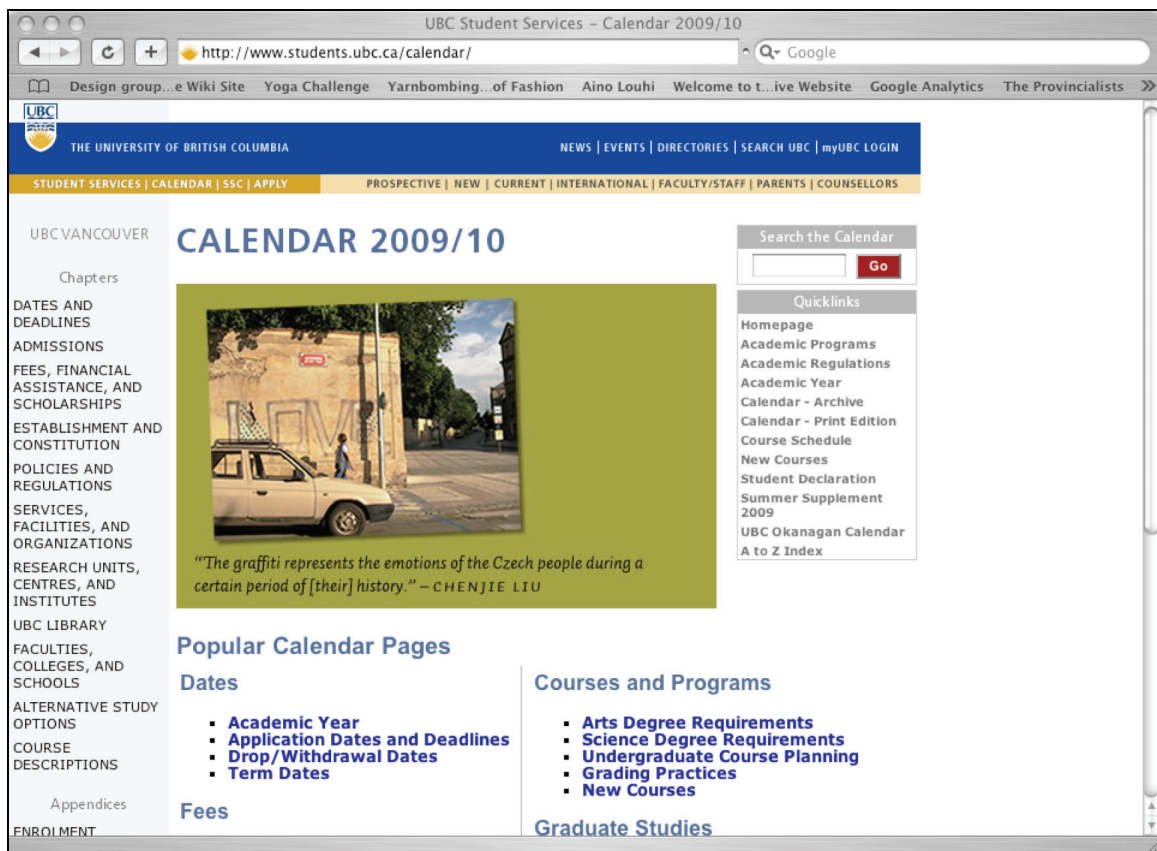

Figure 6a: Vancouver Web Calendar 2009/10 Homepage http://www.students.ubc.ca/calendar

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58 Heidi Peterson, interview with Leanne Prain: June 12, 2009.
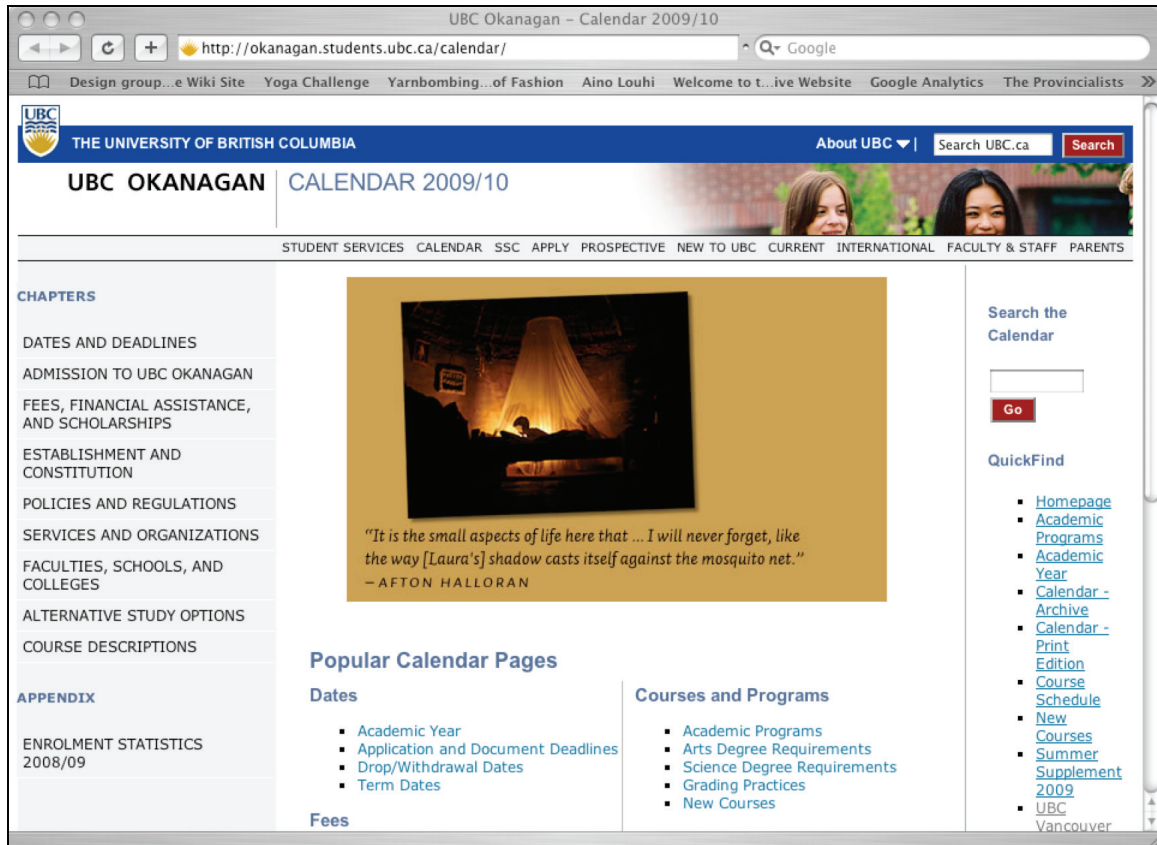
Figure 6b: Okanagan Web Calendar 2009/10 Homepage *http://okanagan.students.ubc.ca/calendar*

4.4.3 Usability

During a December Calendar planning retreat the web programming team committed to usability changes that could be made for the February launch of the web Calendars. Dan O'Brien, Senior Web Coordinator, committed to several improvements. He made the search input fields available from every Calendar page, rather than from a sub-page as it had been in the past. This placed the search boxes in a more noticeable position and would allow users to find the search function faster, thereby enabling users to find their content much more quickly than in the past. It was hoped that this prominent search box would reduce the

amount of users who left the homepage frustrated. This change met a key priority of the

editorial group. Up until the time that O'Brien integrated this improvement the Calendar

homepage did not have a search box that indexed calendar content. The search field had

only been accessible from pages secondary to the homepage, and there had been nothing on

the home page to indicate its existence. To further confuse visitors, there had been an

entirely separate search box on the bottom of the page that was not indexed with calendar

content, but for AskMe, a FAQ engine applied to Enrolment Services web pages.[59] In

addition to changing the location of the search boxes, the search function was also

improved. O'Brien and Kim ensured that the Academic Year, the calendar of university

dates and deadlines, was indexed by the search function so that relevant dates and deadlines

would show up in search results. In the past, this information had been entirely ignored by

the search function. When the Calendar team regrouped at a planning meeting on April 28th,

2009 after the first web-only release, the improved search function was the most

prominently used element of the site, rating the highest via Google Analytics. O'Brien's team

also changed the search function so it would report not only on keywords, but also list

relevant and specific titles as Moller had requested.[60]

　　Moller's study had noted that the most common usability failure was that users did

not understand the labels or navigation of the website. There was an overwhelming amount

of information on the page. The calendar websites have three navigational elements. The

first was the standard site-wide UBC blue bar that the University Public Affairs department

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59　Prain. *Minutes from the 2008.09 Academic Calendar Retreat*, 3.
60　Prain. *Minutes from the 2008.09 Academic Calendar Retreat*, 4.

requested that all UBC websites display. This blue bar, part of a campus-wide CLF (common

look and feel) initiative, led back to the UBC's main URL *www.ubc.ca*. There was also a yellow

bar imposed upon all Student Service websites that allowed users to navigate the Student

Services websites. Finally there was the Calendar chapter navigation that existed in a left

hand column (*see Figures 5a-b*). In addition to have the names of the sections, the chapters

were marked with roman numerals – a carryover from the numbered chapters in the print

edition. This institutional navigation imposed as a hierarchy on the site that had nothing to

do with an intuitive user experience (*see Figures 5a-b*). For the 2009/10 Calendar, the team

was able to remove the roman numerals, but the multi-layered navigational scheme and the

antiquated book characteristics remained. Peterson commented:

> We are still using the old bookish format. For instance, the template still has the words 'Chapters' embedded in the top left column, even though we removed the roman numerals that were used to denote the chapters. Other remnants of the book are the appendices, and the entire way we conceptualize the content into its current divisions.

Collins noted that radically different labels might have to go through a Senate approval

process. The actual structure of the website could change, but the labels on the content

could not due to legal concerns.

Moller recommended that navigation could be adjusted to work in a format that

resembled a tree. This structure would allow users to expand the navigation down to a third

level without having to drill down through webpages. This navigation could occur through a

menu which would not require users to travel from one page to find the information they

were seeking. Instead, a tree navigation would reveal the structured content of the site by

unfurling menus with a variety of options in response to a user rolling over navigational elements with their cursor.

4.5 PLANS FOR THE FUTURE

During the April planning and post-mortem session, staff took inventory of successes in the redesign of the web Calendar and assessed the work that was still required. There remained concern about the calendar proofing process. Curriculum coordinators at both campuses had expressed that they felt the process was inaccurate. Collins suggested that as a measure of goodwill it would be helpful to demonstrate to this group how Peterson had revised parts of the Calendar and show that O'Brien's implementation of a footer on each web page that showed a timestamp of a webpages last update along with the name of the editor.[61] If content providers could track changes, they are able to proof the content with confidence.

It seemed as if winning the confidence of users was really the dilemma that Enrolment Services needed to solve. The elements of the website that allowed users access to the content were the tools that would help them feel comfortable with the publication and win them over as converted users.

There were discussions of tailoring the homepages for different audiences. Moller had suggested making a homepage that listed key stakeholders; such as counselors, students, and faculty. Each group would be provided with their own splash page that would provide them with relevant content. Kim suggested a solution that was even more dynamic – he

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[61] Prain. *Minutes from the 2008.09 Academic Calendar Retreat*, 4.

wanted to create a homepage that would change depending on the visitor's identification or time of year.[62] Both of these ideas were popular with the staff but did not seem feasible with the large wish list of development priorities.

From the time that the first online calendar was made in 1998 until the time that Moller undertook her usability study ten years later, theories of web accessibility had changed. James Kim remarked on the progress:

> Usability has improved hugely, although there are many more opportunities for us to pursue. Since information is now dynamically generated, menu and navigational elements correspond to individual pages, which makes browsing much more intuitive. The 2000-01 Calendar was limited to a single, static menu bar, which meant visitors could not move 'horizontally' through the Calendar, but had to return to chapter headings to navigate through the hierarchy.

A further improved search engine was also implemented to allow free access to the text within the Calendar. Future plans for usability included several other elements that needed to be put in place. Communications considered an additional study on labeling and navigation, likely done through the method of surveys or card sorting (Card sorting is a usability technique where a user group, usually inexperienced with design, generates a category tree for a website. Card sorting is considered a useful method in designing workflows, menu structure, or web site navigation[63]); the further simplification of copy to use shorter paragraphs and bulleted lists; and the implementation of improved menu navigation by creating more visual change with the design.

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[62] Prain. *Minutes from the 2008.09 Academic Calendar Retreat*, 5.

[63] "Card Sorting" Wikipedia <http://en.wikipedia.org/wiki/Card_sorting> Accessed July 21, 2009.

While the wish list was long, the development team was in good spirits over the improvements that had been made. Peterson expressed the groups desires succinctly[64], "I am hopeful that our clients will adapt to the new format and bookmark their favorite passages online. I like to think that our clients will pay more attention to the online Calendar now, and will make sense of its superior (and improving) features".

The Calendar development team should be commended for recognizing their limitations and only focusing on the realm of the possible. They made improvements using available resources, and they chose to make the decisions that they thought would have the greatest impact for each release. These are lessons that other publishers should take into account – a website can be improved in pieces if necessary. In a large re-design, it is wise to focus on top priorities and acknowledge that all facets of a redesign may not be addressed concurrently.

4.6 A LAUNCH WITHOUT PRINT

On February 24th, 2009 the UBC Okanagan Web Calendar was launched without a print companion for the first time. Two days later, the UBC Vancouver Web Calendar was launched. Both calendars were provided to their respective campuses on the same week, which was considered a great success from in previous years when they had materialized one month apart.

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[64] Heidi Peterson, interview with Leanne Prain: June 12, 2009.

The expectation that the print Calendar would be missed proved false. There was little response to the change. Resources were allocated to other work. It was as if the printed Calendars had never existed. Users appeared to adapt to seeking their information through the form that was available.

While the Calendar editors did not receive any response regarding the end of the print calendars, Collins, Kim and Eaton suggested that there could be some response in September 2009 when users arrive on campus and hard copies are expected to be available.[65] Time will only tell if the absence of the print Calendar is noticed at all.

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[65] Chris Eaton, interview with Leanne Prain: June 10, 2009.

5. Conclusions

There are several recommendations for those who find themselves with a print publication that will be converted to a website and those with a vast online reference document that needs updating.

First, all web projects should not only have a budget to be allocated for immediate development, but also a budget for upkeep and the re-visioning of the website. There is no doubt that all electronic publishing efforts should be designed to adapt to emerging technologies. With digital content, publishers must be prepared to make changes. As the UBC Academic Calendar situation makes clear, publishers should include website maintenance as part of their digital publication process.

Reference publishers who deal with a wide variety of stakeholders need to develop a formal communications plan in order to communicate their processes to their content providers. In the case of the UBC Calendar, staff needed to send a clear message to the university community on the Calendar's use and purpose. Communicating the rationale for draft updates and the process by which the editors worked could have served as a persuasive method in order to instill confidence with Calendar readers. There is nothing wrong with transparency in a publishing program. Being direct about content and the editing process serves all kinds of publishers, particularly those who put content online that may be re-purposed elsewhere.

A communications plan would not only assist content providers in understanding why certain content is selected for inclusion but would also enable publishing staff to narrow

their wide vision of stakeholders being all readers to seeing a targeted group to fulfill this role. This narrowing of scope would keep all involved parties – editors, content contributors, and production staff on the same path. It would also guide the priorities for future development.

It is in a publisher's interest to determine how content might be re-published to other websites and online applications in the future. If a publisher of reference material waits too long to provide their content in a form that can be shared among users, their content may be repurposed without their consultation. In the case of the UBC Calendar, faculties were often copying content from the Calendar to share with their students on their own websites. This was unfortunate as wayward content can quickly become outdated, and this inconstancy could reflect poorly on the Calendar's accuracy. As Communications did not provide content in a publishable format outside of the web Calendar experience (such as an RSS feed or widget), faculties often took material without consultation. With the advent of RSS and content remixing movement –it is not illogical to predict that few people will want to visit the Calendar websites in a few years. Instead of browsing content on the Calendar website, they may want to extract content to be read on their personal devices and readers in the forms of feeds or locally installed applications. Just as trade publishers prepare for this eventuality, the Calendar team would do well to address the emerging need to customize and share content. The Calendar retreats stimulated a dialogue over what was considered pure Calendar content and what was not. Publishing for the dynamic web environment puts an emphasis on the editors to determine which content is inherent to the publishing effort, and

which content is supplementary. The decision that Enrolment Services made to 'chunk' content and organize it was a first step in the process of making content malleable. Reducing the amount of content on each Calendar webpage would be a second step to allow users to locate the information that they require quickly and in the case of re-publishing, would allow users to be sure that the content that they are sharing has all of the elements necessary to inform readers without overwhelming them.

There was a tendency with the print Calendars to surround the core content with value added material such as the campus map and a three-year calendar in order to up-sell the Calendar to users. This approach is not viable on the web. Users constitute a specific audience looking for specific content. They do not want content directed at other audiences. Publishers should avoid publishing for an audience that is composed of each and every person who could encounter the publication. A calendar study by the Association of Registrars of the Universities and Colleges in Canada (ARUCC) in 2006 noted that[66]:

> When asked to rate the highest importance of the Calendar, 36% of respondents indicated that it was most beneficial for providing information to current students, while only 16% deemed that the highest importance was for recruitment purposes [….] 33% of respondents indicated the highest importance of the Calendar was as a reference tool for faculty and staff.

While UBC was not alone in addressing a broad audience in their calendar, this study makes it evident that calendar content should be focused on current students and as a reference tool for faculty and staff. Including extra content to aid recruitment efforts was not considered necessary by ARUCC – in the UBC Calendars, it muddied the essence of what a

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[66] *ARUCC study*, 10.

calendar should contain. The ARUCC study is a tool that could have been used to allow editors and content providers determine what sort of content was essential and what was unnecessary.

The results of user testing undertaken by User Experience Architect Claire Moller identify difficulties perceived by users of a web publication that had been derived from a print publication. Her results are general concerns that could be relevant to any website that has existed for a length of time. Perhaps, in addressing the recommendations for 'Phase Two' implementation at the staff retreat in April 2009, Enrolment Services will simplify the complex list of goals. A successful Calendar can be established by focusing on user expectations and best practices for keeping content dynamic and able to change with web trends. What Enrolment Services learned over a ten-year period was that digital content is constantly evolving and will continue to surprise publishers with unexpected developments. This is a lesson that all publishers should heed as they venture into the world of online publications. As Heidi Peterson noted:

> the re-conceptualization of content will be an evolution, I think. We need to organize the Calendar along the lines of related material as well as along the lines of the fundamental needs of students […] I can see will continue to create new tools.

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