

University Web Portals

Patterns and Policies

Audra Lukaitis and Bill Davey

School of Business Information Technology, RMIT University, Australia

Abstract: A two-year study of Web portal use in a large university has found a number of results that can help in management decision making about the use of university Web portals as a communication channel. The study involved the collection and analysis of Web usage statistics for a business information technology school in a large city university over a two-year period. Findings initially indicate that: it is likely that some students and prospective students prefer personal contact (or face to face communication) to information provided by the portal; students use the portal mostly during critical phases in the academic calendar; students use the portal “at the last minute” or “just in time”; students are only interested in information absolutely specific to their immediate needs; students are not interested in multimedia per se. These findings should help us in improving Web portal use as a communication channel. Preliminary findings can contribute to our understandings of student information seeking behaviour and choice in the use of administrative educational information systems and communication channels.

Keywords: Web portals, university administration, communications channels, management decision making

1. INTRODUCTION

Information technologies continue to evolve and develop at ever-increasing rates. “*While radio took over 40 years to reach 30% of North America’s population, television took 17 and the Internet only 5*”. (Forgas and Negre, 2004). Madell and Muncer (2005) in a study of Internet and mobile phone use by young people found that usage was “complementary”, in that “... *young people use the Internet and mobile phone strategically to meet different communication needs*”. Smoreda & Thomas (2001) indicate that Internet users’ social networks are more extensive and active than those of non-users, as there are more opportunities on the Internet for social connectivity through email, chat rooms, e-groups, instant messaging, and personal spaces.

Likewise, Jung, Kim et al. (2005) found that the most popular Internet usage among youth was related to email, chatting, games, mailing list,

newsgroups, or surfing Web sites, maintaining a personal Web page, listening to or downloading music and reading online newspapers (Suryani, 2007).

If communication between students has become increasingly technology based, then the educational administrator and academic must become aware of how students seek out information and get their messages from a university, and hence develop systems that meet the communication expectations and information seeking behaviour and preferences of students.

Changes in Australian Government education policy, direction and funding mechanisms, and amalgamations of Australian universities and colleges of advanced education, mean that university student participation rates have been steadily rising; likewise, there has been growth in onshore and offshore international student enrolments. Consequently universities have become bigger, more complex organisations spanning geographical and cultural boundaries. Pressures to contain or reduce expenditure, pressures to do more with less, efforts to improve and deliver quality and efficiency in the context of multi-campus, and student preferences in communicating with their university, underlie the importance of understanding how and why students use various academic information systems and communication channels.

2. WHAT OTHERS HAVE FOUND

The literature of Web use by University students does not give a unanimous picture. Aiken, Martin et al. (2003) put this very strongly

“...much is still unknown about how college students use the Internet, Web, and campus information systems for academic work and leisure.”

Similarly Uçak (2007) remarks that while there has been much research on the internet, few studies have looked at internet usage and university students.

In a recent study of Indonesian students studying in Victorian-based universities, when participants were asked about how often they visited certain Websites over a two-week period, approximately one third of respondents checked their own university Websites more than 40 times but more than half (55%) didn't look at other university websites at all. (Suryani, 2007) When the participants were asked about what was the most useful item to get information to support their study, 50% preferred the Internet, 25% opted for lecturers or tutors, while 21% sought information in books, and others consulted the advice of friends.(Suryani, 2007)

Results indicate that the majority of students now have access to a computer at home (91%) and most of these students have access to the Internet (86%) Sherry & Fielden (2005). Likewise, a study of Internet use habits of students in a department of information management in a Turkish university revealed that the majority of students used the Internet every day, and preferred electronic media to printed media, and sourced information

mostly from the Internet and from their department's computers. (Uçak, 2007).

When looking for information on the Internet, the students consider most how easy it is to access. The students find the quality of easy access of information more important than its other features and they use search engines most in seeking information (Uçak, 2007).

Young people value the Internet's inbuilt immediacy – in accessing information, in communicating, etc. – as one of its most basic and positive elements. Thus, they choose the more immediate possibilities the Internet facilitates compared to those with slow reaction times and results which are not immediately generated (Forgas and Negre, 2004).

Interestingly, Spennenmann (2007) in a recent study of Internet usage by nine Australian universities (students, administrators and academics) found that the majority of users (81 per cent) used the service between the standard office hours of 8.00 and 5.00 with another slight peak after dinner (7.00 p.m.).

Huang, Chen & Chen (2004) in carrying out a study of communication channels used in a graduate program at an American university asked students how often they checked their E-mail accounts and the school Website. The researchers found that 96.25% of participants checked their E-mails at least once a day, where 83.75% visited the school Website at least once a week. The researchers also found that students appreciated the rich content of their school's Website and were aware of constant updates. The researchers highlight comments made by one student who said that as a prospective student, he got all his information about the program from the school's Website, but relied more on information distributed via E-mail once enrolled (E-list servers). Interestingly the study also found that 12.5% of participants preferred oral announcements, often preferring to clarify or confirm a message with the sender.

3. THE STUDY

In this study, we examined an aspect of Web usage behaviour of students over a two-year period, looking for trends in student access (or prospective students or visitors) in a school in a business faculty. We were seeking "general usage trends". The portal under investigation was open to public access; visitors are not controlled by authentication. As a result we have identified some policies that our University can use to ensure maximum impact from the Web site as a portal for communication with students. The impact of the study comes from a subsequent examination of how an educational manager might approach the same task in their institution. It seems that the patterns we have found are general; however, the method we have used to conduct the analysis could be useful in other places.

The school WEB portal studied consists of three main content areas, each with a known cycle of activities (e.g. timetable updates, annual brochure production etc.):

- **Current student and staff administration** (timetables, course and general program information, program brochures, information for prospective students, open day, orientation, elective course information, forms, important links to university services such as the library, faculties, schools, administrative services etc.). This works as both an intranet and Internet. (See Appendix A)
- **Prospective student marketing/general information** – prospective students, program promotion, key links to Faculty and University marketing endeavours (news stories etc.), special one off promotions (this area also crosses over with student and staff administration).
- **Research** – (major research projects etc.), research training scheme, publications. Also includes extensive staff profiles with publications, particularly for research staff, information for prospective Masters and PhD research students.

The university has an array of policies and procedures relating to the creation, implementation and upkeep of electronic content and distribution. All electronic communications relevant to the University's products or services must comply with the University's communication, advertising and marketing guidelines.

Compliance is ensured through training, style guides, policies and procedures, and linking communication between three major organizational levels: schools, faculties and the university. Compliance and communication is maintained by close relationships between the three organizational units via designated staff.

For example the University Web Style Guide clearly defines style requirements for publishing Web content at the university in order that:

- Design and presentation of content is of a high quality and aligned with the authorised corporate identity of the institution;
- Web publishers are able to appropriately reflect and promote the University;
- Persons creating Web pages understand their responsibilities in relation to the design and content of university Web pages;
- Content on University Web sites is consistently presented to improve the experience of site visitors;
- A high level of accessibility exists on University Web pages;
- The university meets its obligations under legislation affecting Web content and presentation (RMIT Style Guide 2008).

What can and cannot be done is clearly communicated to relevant staff; policy is assured at faculty and university levels.

4. ANALYSIS

One of the researchers – in addition to academic duties – is the school Web site manager and for many years in the past was a program coordinator.

Currently the Web role includes overseeing the school's Web presence, with an emphasis on accuracy, integrity and timeliness of information.

Further, the role entails ensuring compliance with relevant RMIT multimedia and marketing policies and managing the delivery of two school Web usage reports per annum with reporting to relevant stakeholders. Therefore the researcher is involved in the gathering, analysis and reporting of school web usage statistics as well as the direction of the school's Web presence, ensuring adherence to university policies and guidelines.

In this study, we have analysed clicks on a specific breakdown of pages in the Web site of a single school. Although this is a parameter at some distance from the intentions and motivations of visitors, Hofacker and Murphy (2000) assure us that clicks are a reliable measure of Web site performance.

Website performance metrics are indicators of whether or not the Website is successful. Measuring was implemented by tracking different traffic parameters associated with the Website. The most common parameter relates to the frequency of use of the Website, that is, how many people are using the Website. This is a fairly simple and straightforward measure of the reach of the Website in terms of hit numbers. The reach of a Website is an important aspect of performance because it measures the extent to which the Website is known, and accessed by different people. Website reach can be measured by measuring the number of unique visitors to a Website and has been used in previous studies on Websites (Tarafdar and Zhang, 2008).

Gathering of usage statistics took place at the beginning of a new semester over a two-year period, commencing one week before semester start and four weeks after semester start for semesters one and two. With a history of program coordination and administration experience, the first three-weeks of a semester time frame were known to be high student communication traffic periods (face to face, phone, email, reception enquiries covering a gamut of predictable and unpredictable enquiries). The week before semester start was used as a point of comparison.

The researchers used descriptive statistics only and hence have restricted our findings to those conclusions supported by overwhelming patterns. For instance, over a four month period hits at the University front page varied through 1099305 to 1139740 to 1428275 to 1360401. There may be some significant difference between these figures, but no pattern is strong enough for us to draw a conclusion. Alternatively, the Information Systems School Website was hit 2008 times in December but 4085 times in February. These figures are so different that it seems irrelevant to perform significance tests. In the case of each analytical conclusion stated here, the descriptive statistics are conclusive in the same way.

The following patterns were at these extreme levels:

- Hits on elective subject pages were 20 times higher than hits on core subjects.
- Hits on information pages related to specific subjects were twice as high in the three weeks prior to close of enrolments than after those weeks (weekly totals).

- Hits on individual academic staff pages were ten times higher than any other general contact pages.
- Hits on individual academic staff pages were twice those of any specific degree program page or other information page.
- Over five degree programs (including postgraduate and undergraduate coursework programs) hits were proportional to enrolment in each program.
- Over the two years of the study there has been a smooth increase, as measured over the same month each year in total hits. There is no evidence that significant changes in the Web site have changed hits.

5. CONCLUSIONS

Our conclusion comes in two parts. First there is a recommendation to the managers at RMIT. Secondly we have lessons learnt from our analysis that can inform other managers when inspecting their own records. From the very different hit levels we discovered there are a number of conclusions that we might be able to act upon.

5.1 Some students prefer personal contact to information provided by the portal

We were interested in the high levels of hits on individual academic staff pages. Although members of our staff are interesting people it seemed strange that students looking to overcome their information needs would be spending time looking at people pages. An informal interview of reception staff and people in charge of subjects or programs was conducted. These people told us that they are continually asked for information that is readily available on the Web site. Those interviewed believed that students have a “need” to talk to a person about their programs, even when that talk just reiterates information available on the Web. This may be a phenomenon related to specific students who do not trust the Web site, and should be investigated further.

5.2 Students use the portal mostly during critical phases in the academic calendar and students use the portal “at the last minute”

A seasonal trend was obvious over the four semesters represented by the study period. We were suspicious of the months where higher activity occurred and compared weekly statistics to the academic calendar. The hits were consistently very high in the weeks of enrolment and the last week before changes to enrolment are closed. This indicates that at least some cohort of students does actively use the Web site for information around the

critical times of the semester, particularly when seeking information about “elective” subjects.

5.3 Students are only interested in information absolutely specific to their immediate needs

The Web site is very broad in content. There are stories of successful graduates, interesting advances in applied research, social activities sponsored by the University and a plethora of educational opportunities not immediately part of a degree program. None of these ancillary pages had hits approaching 1% of the hits to pages from degree programs. The existence of a Web site may allow distribution of the many aspects of a University, but these pages are accessed at a level that may indicate access by only the authors of the pages.

5.4 Students are not interested in multimedia per se

Over the two years of the study a number of initiatives have been taken to improve the “quality” of the Web site. These initiatives have resulted in redesign of sections of the site. There was no evidence from hits to “improved” and unchanged pages that these changes have resulted in additional use by students. Given the amount of effort required to make these improvements it seems from our figures that research should be conducted into the payback from formatting changes to information pages.

These findings should help us in improving use of Web channels as a communication tool for students.

5.5 Getting knowledge from hits

Educational managers, like those in any other industry, must make balanced decisions. The concept of perfect data and infallible decision making is silly. At some point every manager must decide how much effort to put into data gathering before making a decision. Our system of examining hits and paths seems to err on the side of simplicity. To use simple descriptive statistics, as in this exercise, will not yield robust results. To use these as an indicator of both policy direction and subsequently policy refinement seems a sensible balance between effort and outcome. In our case changes in architecture of the site, including searching and tree construction have resulted in significant gains in use and quality of communication.

6. REFERENCES

Aiken, M., J. Martin, et al. (2003). College Student Internet Use. *Campus-Wide Information System* 20: 182-185.

- Forgas, R. C. and Negre, J. S. (2004). The use of new technologies amongst minors in the Balearic islands. *AARE Conference proceedings 2004*. "Doing the public good". Melbourne, Australia, AARE.
- Hofacker, C. F. and Murphy, J. (2000). Clickable World Wide Web banner ads and content sites. *Journal of Interactive Marketing* 14 (1): 49-59.
- Huang, Shen-Cheng, Chen, Chao-Hsiu, Chen, Hsin-Liang (2004). A Case Study of Communication Channels in a Graduate Program. *Proceedings of the 67th ASIS&T Annual Meeting*, Vol.41, 147-155.
- Jung, J.-Y., Y.-C. Kim, et al. (2005). The influence of social environment on Internet connectedness of adolescents in Seoul, Singapore and Taipei. *New Media Society* 7 (1): 64-88.
- Madell, D. and Muncer, S. (2005). Are Internet and mobile phone communication complementary activities amongst young people? A study from a 'rational actor' perspective. *Information, Communication and Society* 8 (1): 64-80.
- Nielsen NetRatings, Average Web Usage Month of March, 2002 U.S., 2002a, <http://pm.netratings.com/nnpm/owa/NRpublicreports.usagemonthly>
- Nielsen NetRatings, February 2002 Global Internet Index Average Usage, February 2002b, http://www.nielsen-netratings.com/hot_off_the_net_i.jsp
- RMIT University Web Style Guide 3.0 (Staff log-in required).
- Sherry, C. A. and K. A. Fielden (2005). The millennials: Computer savvy (or not?). *HERDSA*.
- Smoreda, Z. & Thomas, F. (2001). "Social networks and residential ICT adoption and use", Eurescom Summit 2001 (3G Technicoliges & Application), Heidelberg 12-15 Nov. 2001.
- Spenneman, Dirk H. R.(2007). Learning and teaching 24/7: daily internet usage patterns at nine Australian universities. *Campus-Wide Information Systems* Vol. 24 No. 1, 27-44.
- Suryani, A. (2007). Exploring new media usage among Indonesian students in Australian universities. *2007 ISANA International Conference "Student success in international education"*. Stamford Grand, Glenelg, Adelaide, Australia, ISANA.
- Tarafdar, M. and J. Zhang (2008). Determinants of reach and loyalty - a study of Website performance and implications for Website design. *Journal of Computer Information Systems*, 16.
- Uçak, N. Ö. (2007). Internet Use Habits of Students of the Department of Information Management, Hacettepe University, Ankara. *The Journal of Academic Librarianship* 33(6): 697-707.