

Trends and outcomes from five years of surveying first year university students about ICT and social media at an Australian university

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Abstract

The Student Services' Division at The University of Western Australia has conducted an annual survey for the past five years of first year students' access to, experiences with and expectations of emerging technologies at university. In contrast to many other institutional surveys of student use of social media to inform learning within the classroom, these survey findings have been utilised to improve student engagement of first year students outside the classroom. Most recent findings show that students are enthusiastic about YouTube and discussion boards, prefer Facebook to other online communities and are enthusiastic about universities using these tools for engagement but less so for teaching (Cluett & Skene 2009, 2010). Survey findings have informed program enhancements in services provided to support students, particularly through their first year of study at university, when it is critical to engage students and offer comprehensive support services.

Introduction

Students in Australian tertiary institutions make use of emerging technologies to varying degrees to aid their learning, engage with staff and fellow students and manage their social lives and commitments outside university. This statement is not contentious in itself: it is when we try to define the degree of adoption and the extent of usage and value derived that the debate becomes more interesting. A number of institutions have endeavoured to resolve the questions of 'which tools' and 'how much' through the use of surveys, case studies, ethnographies and interviews, so that initiatives introduced are evidence-based and responsive to student need (Kennedy, Dalgarne, Gray, Judd, Waycott, Bennett, Maton, Krause, Bishop, Chang & Churchward 2007; Oliver & Goerke, 2007). The focus of these studies has mostly been on the adoption of emerging technologies in the classroom and results have been ambivalent about students' enthusiasm and uptake.

This paper reports the use made of evidence, drawn from five years of surveying students completing their first year of undergraduate study at an Australian university, to improve student engagement with services to support them in their transition to university and throughout their studies. The longitudinal data is valuable in and of itself in revealing the rapid pace of change in adoption of new tools and technologies. The focus of this paper though is in how the findings have been used to inform continuous improvement in delivery of services to students and engage them beyond the classroom, particularly in the first critical weeks of their first year. It argues that it is important for professional staff who provide

support services for students to understand student use of new and emerging technologies and where practicable, apply that knowledge to adapt their services to engage students.

Review of previous studies of use of emerging technologies

Most surveys of student use of emerging technologies focus on assessing their value for adoption in the classroom. One of the most comprehensive studies done in Australia is a cross-institutional survey of first year students undertaken by the University of Melbourne, the University of Wollongong and Charles Sturt University in 2007 (Kennedy, Dalgarno, Gray, Judd, Waycott, Bennett, Maton, Krause, Bishop, Chang, & Churchward, 2007). Published under the title 'The net generation are not big users of Web 2.0 technologies', the study's preliminary findings note the great diversity in uptake of various tools by commencing students at the three universities and cautions universities about the risk of assuming that their students are enthusiastic adopters of Web 2.0 tools (Kennedy *et al.* 2007). This finding may well still hold true for adoption for learning-related usage but the survey predates the rapid expansion of use of social networking sites, led by Facebook over the past few years and the increasing use of mobile technologies. Students are selective in their use of various technologies to aid their study but the use of social networking sites, especially Facebook, has grown to 89% in the 2010 data from the survey reported in this paper.

Other Australian universities have used surveys and ethnographic studies to try to capture a clearer picture of their students' use of emerging technologies (Oliver & Goerke 2007; McNeill & Diao 2010; Herrington, Herrington, Mantei, Olney & Ferry 2009). These studies all demonstrate a shifting landscape when it comes to patterns of student use, access, expectations, preferences and experiences. New technologies can cause rapid shifts in the way students access information and this is not just for those who are technologically savvy: mobile phones that have internet access are an example of a technology that has been adopted widely in the past two years. The ambivalence noted in many surveys about the extent of adoption of various tools demonstrates the need to continue to survey students regularly and capture the shifts that can point to trends worth incorporating into changes of practice (Gibbons 2007). This has been the philosophy underpinning the NODE survey over the past five years.

The UWA NODE Survey

The NODE survey is administered online annually in November to students who have completed at least 50% of their first year units at UWA during the year just past (approximately 4000 students each year with an average response rate of 14%). The survey commenced in 2006-07 with the 5th iteration administered in 2010-11. A randomly drawn prize (\$250 value) is offered and students are reminded about the survey via email.

Evolution of the survey

The NODE Survey is conducted by and on behalf of Student Services at The University of Western Australia to inform delivery of services to first year students and be responsive to their changing needs. The survey's usefulness has been recognised as its profile has risen over the five years it has been running and other areas of the university have asked to have input. Consequently, a range of university teams and sections are asked to consider topics of particular interest each year which might result in new questions being added to the survey. Annual results are written up into a 2-page 'TechNODE bulletin' document which is

launched to staff via a networking morning tea event and then distributed online to staff and students.

The survey contains approximately 50 questions (this varies slightly each year – see below) organised into 3 sections which focus on students' access to, experiences with and expectations of emerging technologies at UWA. The survey uses a core set of questions that are used every year to generate trends over time. In addition, questions are added (or removed) to reflect changes in technologies. The original survey provided a baseline data set by focusing on the tools that students owned and what respondents thought the university should provide. The 2007-08 and 2008-09 surveys added questions about Facebook, about the distinction between using tools for teaching and using them for engagement and also included a focus on the use of emerging technologies in student learning. The 2009-10 survey added questions about Facebook groups, Twitter, Google Wave, Google apps and virtual world as well as a series of questions about computing facilities and support on campus. Some questions about printing, email accounts and home internet plans were removed over this period to streamline the instrument. The most recent survey administered in 2010-11 added questions about access to tablet devices (iPads etc), experiences with e-books, attitudes towards online privacy and the demand for mobile versions of university websites. Some questions are removed (asking about broadband and dial-up) while others have a resurgence of importance (how and where students print).

Findings

Access to devices and the internet is high amongst this population and reflects a high level of 'connectedness' amongst first year students. In 2011, 86% of respondents reported owning a laptop. This figure has risen from 57% in 2006-07, 72% in 2008-09 and 84% in 2009-10. However, 25% of laptop owners never bring their devices to campus and a further 51% only bring it when they specifically need to. Mobile phone ownership amongst first year students has been close to 100% since the survey began (98% in 2006-07 and over 99% in every year since and 99.6% in 2010-11). Mobile phones with internet capabilities now make up the majority of devices with 76% internet enabled in 2010-11 (up from 42% in 2006-07). Whilst uptake of tablet devices may be more widespread in the broader community, ownership amongst surveyed students remains low. Only 9% of respondents owned a tablet-style device and only 12% of those students ever use it to take notes in lectures. 86% of respondents in the 2010-11 survey access the internet at least twice a day and 44% indicated they are online 'most of the time'.

Skills and experiences amongst surveyed students are concentrated on three main tools; YouTube, Facebook and discussion boards. YouTube is the most commonly used tool (93% of respondents use it according to the 2010-11 survey and rates have been at or above 90% since 2008-09). 89% of respondents now have a Facebook profile and 83% use Facebook fan pages. 89% of respondents indicated that they use discussion boards to some extent and this usage rate has been at a similar level since the survey began. Moderately popular tools include blogs (48% of 2010-11 respondents indicated they use them down from 57% in 2008-09 and 50% in 2009-10), instant messaging (75% usage in 2010-11, 80% in 2009-10 and 73% in 2008-09) and podcasts (41% in 2010-11 up from 25% in 2008-09). MySpace (37% in 2010-11 down from 47% in 2008-09) and Twitter (24% in 2010-11 up from 21% in 2009-10) remain low although Twitter is steadily increasing while MySpace is declining. Use of RSS remains low (13% in 2010-11) and use of virtual worlds has remained steady at 6-7% since the survey began while LinkedIn was the least used tool on the survey (3% in 2010-11).

Student responsibilities and attitudes were canvassed for the first time in the 2010-11 survey with a focus on online privacy. 55% of respondents reported that they are comfortable with the extent to which others can find information about them online and 84% actively seek to protect their privacy online. 78% indicated that they think about who might access any material they post online and 61% said they read the terms of service on the online tools they use. However, while students seemingly guard their personal privacy online, 74% of respondents indicated that they have seen friends upload online content that they think they will regret later.

Questions about the use of emerging technologies for learning and teaching showed that in 2010-11, the tools students found most useful for learning (where they were used) were Lectopia¹ (91% found it useful), the university LMS (94% found it useful), PowerPoint (80% found it useful) and discussion boards (63% found them useful where they were used in teaching). Course webpages (51% found them helpful), podcasts (15%) and blogging (6%) were the least useful tools for teaching and learning. A recurring theme in all surveys is that students feel strongly that they learn best from face-to-face teaching. It is also interesting to note that 39% would like some kind of ICT training (this figure has been in decline since 2008) and 37% think that they get the ICT support they need for their studies.

Outside the classroom engagement and communication is dominated by two tools – SMS and Facebook. Students in the 2010-11 survey were asked about their preferred non face-to-face method of communicating with their friends. SMS (53%) was the top choice with 27% preferring using an online social network. Phone calls (9%), instant messaging (9%) and email (3%) were much less preferred as peer-peer communication methods. Students had strong opinions as to which tools the university should use to deliver services, provide information and build communities. In 2010-11, discussion boards (88%), Facebook fan pages (70%), YouTube (64%) and podcasts (62%) were the most recommended. All other tools were of much lower preferences for students including blogs (44%), wikis (47%), instant messaging (49%) LinkedIn (15%) and virtual worlds (14%). These trends are similar to previous survey years although it is notable that Facebook fan pages have consistently risen in popularity with students and have climbed from 58% of respondents recommending them in 2009-10 to their current ‘second place’ with 71% thinking the university should use them for engagement. Uptake of eBooks is varied with 45% indicating that they didn’t use them in 2010-11 while a further 47% replied that they only used eBooks when they had to. Only 8% indicated that they like using eBooks and are happy to access them.

Expectations of university ICT have been consistently high since the survey began. 95.6% of respondents expect lectures to be recorded in some way and to be made available to students. This figure has been above 91% since the survey began. 79% of students who responded to the survey indicated that the internet on campus is acceptable or above expectations although only 54% said the same of the wireless coverage and 56% about the printing facilities. 68% of students consider both the school/faculty computer labs and the shared labs to be acceptable or above expectations. 62% would use a 24-hour computer lab if one was available (currently 24-hour lab access for first year students is restricted). 62% of respondents want unrestricted access to all websites on UWA student-use computers UWA does not yet produce mobile compatible versions of its websites and demand from students so far appears moderate. 63% would like a version of the student email system designed for

¹ Lectopia is the University’s lecture capture system which can record audio, video and displayed learning materials

mobiles, 58% would like the same for the student records system, 54% for a mobile version of the University website and 49% for a mobile library catalogue.

General trends from the surveys suggest a first year student population who benefit from and prefer face-to-face teaching but who also have high expectations about online services and programs. The proliferation of mobile phones, internet-enabled devices and laptops suggests a cohort that has easy access to the internet

Impact on First Year initiatives

First Year initiatives at The University of Western Australia are focused on face-to-face engagement and as such online tools are used to add an additional layer to our programs. The goal of online engagement is to encourage students to get involved in campus life through joining a society, being involved in mentoring, attending events, meeting other students, and connecting with staff. The NODE survey findings have informed service delivery at the individual program level but more importantly, also in the broader strategy that Student Services adopts in aligning its services with emerging trends and providing appropriate staff development to ensure that this happens.

UWA's first year cohort are predominately school leavers and survey results show that they are enthusiastic adopters of social media in their private lives, to stay 'connected'. The University aims to foster a positive student experience through engagement in on-campus activities. UWA does not offer courses through external studies: first year students are encouraged by the Vice-Chancellor at the Commencement ceremony each semester to get involved in campus life and gain from that experience. In this aim, the University struggles, as do all other universities in Australia, to engage students who face multiple demands on their time and, as other survey data of the first year experience nationally has shown, are spending fewer hours on campus each year. It is therefore a vital part of the strategy to support first year students that the University adopts the tools that they favour themselves, in ways that they approve, to foster connection with services designed to support them.

The NODE survey has been instrumental in shaping Student Services' approach to adoption of emerging technologies. The survey has served to 'normalise' (Bax, 2003; Chamber & Bax 2006) technology within the Division and across broader sections of the University so that new projects aimed at first year students now consider an online component. The original survey formed the basis for an ongoing interest in the sorts of tools students use so that funded projects have grown in scope and budget. The use of emerging technologies is extending to areas beyond the first year programs including to graduations (ceremony photographs are viewable from a Flickr slideshow hosted on a Divisional account) and to residential colleges.

Trend data on students' expectations of what the University should provide clearly demonstrate an expectation that staff will be informed and have expertise in the use of commonly adopted tools. Providing staff development in the use of emerging technologies has been part of the Division's online strategy for the past four years and has been sponsored by an internal initiative fund, the Learning and Teaching Performance Fund and the Australian Learning and Teaching Council (Leadership stream). Resources developed as part of these initiatives are shared beyond the Division as part of a networked community of professional staff who support the online student experience.

Professional staff providing services to students at UWA have found the University's Learning Management System (LMS) of limited usefulness as a means to engage students online and build interactive programs. Features that might be useful in a formal teaching environment such as requiring login with a valid UWA ID restricts access to prospective students and acts as a disincentive to current students. Previous experience has shown Student Services' staff that students want easy access to information. There is therefore a disconnect between what students want and what can be provided with university web resources. It is not always possible or appropriate for institutional approaches to compete with platforms like Facebook and universities need to think about a variety of ways of engaging students online, beyond use of predominately static web pages.

The NODE survey results allow UWA staff to make informed decisions about which tools and technologies would add most value to their programs and to build online engagement on a firm foundation of data analysis. While the direct impacts are listed below there have been a number of indirect impacts of having regular student survey data to use in our environment. For example, equally important decisions are made about what tools not to use. Twitter has been actively excluded from most online engagement programs directed at students simply because the survey tells us that students do not yet use this micro-blogging service in significant numbers (2010-11 data shows uptake at 24%). The low usage of social networking sites for personal career development has prompted development of workshops to students on how to manage their online presence as they move towards graduation and employment.

Direct impact

Results from the NODE survey have enabled first-year focused teams and programs to consider using emerging technologies to add a layer to their face-to-face services and to feel confident in decisions about which tools to use because of the frequency, transparency and relevance of the data. Staff also have access to an institutionally hosted web presence typically used for hosting static (web 1.0 content including images, some HTML widgets and news/calendar functions). All institutional web pages are displayed using the visual identity templates and opportunities for on-site interaction with students are limited.

Findings from the first NODE survey indicated that students were looking for an online community where they could find out more about the university, connect with other students and build a sense of belonging. An in-house environment was built using Drupal software that required students to log in using their UWA identification to post content. The online environment aimed to host student blogs, groups, wikis and profiles and operated between 2007 and 2009 at www.node.uwa.edu.au. Student involvement varied during the life of the community which was most significantly impacted by two main factors: the reluctance of students to use a 'closed' online environment and the dramatic uptake of Facebook as the preferred online social network. Subsequent surveys showed that students were more likely to join a university online community hosted in an online environment they were already comfortable using in their personal lives. As such, the node.live community was relocated to a Facebook fan page in 2009 which now has 5000 fans and is the main online community for UWA students and a hub for social media activity for students at the university. The page can be found at www.facebook.com/uwastudents and has been described by Cluett (2010) and evaluated by Cluett & Seah (2011).

The domination of Facebook as the social network of choice for students surveyed has prompted a range of teams to initiate and develop online communities in this platform. For example, UniSkills is a transition program for first year students that provides support, events, study groups and peer interaction to students who commence study at UWA knowing few people on campus. The UniSkills program places high value on frequent and varied face-to-face engagement and uses the team webpages to host program information, online registration and links to other resources and pages. In 2010, UniSkills launched a Facebook group open to students accepted into the program as well as any higher-year students involved as study-group leaders. The Facebook groups aims to provide an interactive online environment that hosts event photos with accompanying comments, event reminders and discussion boards for study groups. In addition the UWA Students Facebook page serves as an online focal point for much of the student community activity gathering more than 5500 fans in its first 18 months of operation.

Discussion boards consistently rate amongst the most popular and familiar tools to students and because no particular tool or platform is preferred they have been developed as part of Facebook fan pages and groups, have been incorporated into the Learning Management System and have been created using externally hosted tools that can be embedded on University web pages. The STUDYSmarter Honours Hub website aims to build community amongst the university's honours cohort (the Honours hub is viewable online via <http://www.studentservices.uwa.edu.au/page/163489>). The site contains events, podcasts, workshop resources and links and uses the message board to bring together student issues and to build community amongst a cohort that are geographically dispersed and unlikely to have cross-discipline interaction. A detailed description and justification for the Honours Hub can be found in Reilly (2011).

While the survey shows low take-up of social bookmarking as an online tool, results do show that students have high expectations of 'outside the classroom' online engagement including access to resources, FAQ and advice. One example of how Student Services has responded to this level of expectation is the STUDYSmarter English Language Corner that can be found at <http://www.studentservices.uwa.edu.au/page/156053>. Many programs aim to provide students with a comprehensive list of relevant links and resources which is an admirable aim but notoriously difficult to maintain. The English Language Corner uses social bookmarking and tagging, or folksonomies, to efficiently connect students with a wide variety of services and resources that provide academic English language and learning opportunities (Barrett-Lennard, 2011).

Blogging (as a tool and as a concept) is one of the more widely known technologies amongst students and the ability to link to specific posts, to subscribe to updates means that they are useful tools for developing interactions between a team and a target audience. The desire to maintain contact with students from remote high schools who have attended camps on UWA's Crawley campus in Perth prompted the ASPIRE program to create and maintain a blog aimed at students in target high schools. The Department of Education, Employment and Workplace Relations-funded ASPIRE UWA project forms part of the university's widening participation efforts by raising the aspirations of students towards attending university. The blog is hosted using the free blogging platform blogspot and can be found at <http://aspireuwa.blogspot.com/>. Content is written by student ambassadors and aims to maintain contact and engagement with students and teachers during the gaps between campus visits and regional tours.

Survey findings consistently show that students have an appetite for video content and that they are particularly comfortable accessing and uploading to YouTube. In 2010 the UWA International Centre ran a competition that required domestic and international students to work in teams to create and upload a video that explains life as a UWA student. They used YouTube to host and manage the video contest and the entries were distributed through Facebook and gathered comments and feedback from students. Contest winners were awarded \$1000 during a ceremony with the Senior Deputy Vice Chancellor with \$500 given to the video that gained the most student votes. The International Centre was then able to use the winning videos in their promotion and engagement with students overseas. The creation of video content targeted at students and created by their peers continues to be a strategy being explored by student engagement teams.

With the increasing use of emerging technologies to engage UWA students online, prompted by the NODE survey, there has been a parallel development of supporting resources, guidelines and workshops for both staff and students. Because Facebook dominates our social media presence there are a range of resources focused on this online network. Regular networking sessions bring together all staff who administer Facebook groups on behalf of a section of the university and there are usage guidelines (available here: <http://www.studentservices.uwa.edu.au/page/159441>), a staff training document (available here: http://www.studentservices.uwa.edu.au/ss/learning/llrs_projects/osj_project?f=260708) and a Survival Guide for students (available here: http://www.studentservices.uwa.edu.au/ss/learning/llrs_projects/osj_project?f=260707). Guides are also available for Skype, RSS and various aspects of UWA student IT. In 2011, workshops exploring online privacy and online profiles will be offered to students. A social media hub (available here: <http://www.studentservices.uwa.edu.au/ss/smhub>) allows easy viewing of the main pages directed at UWA students but also makes an easy reference for UWA staff.

Conclusion

The NODE survey has been an effective tool to capture the experience and expectations of our first year students once they have had a year to familiarise themselves with the university's online environment. The survey has provided invaluable data on students' online presence and behaviours and an insight into what they find useful and engaging. Whilst the NODE survey is used in conjunction with other factors to make decisions about the online engagement strategy, its findings will continue to inform service development so that programs are responsive to student needs and interests. Resources are also being developed to help those students who are not so comfortable in the online environment to learn to manage their online presence and to lessen the digital divide between technically savvy students and those who need some extra help.

The survey will continue to be administered annually and the data reported in an easily digestible format to the university community. An evidence-based approach to program development helps to ensure that the focus remains on ensuring that our first year students' online experience is a positive aspect of their overall student experience.

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