



## Where are we up to? A survey of Web 2.0 uptake in a regional high school

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This brief study was conducted as part of a project in the effectiveness of innovative pedagogies conducted in a rural state high school in 2008. The project surveyed an entire cohort of 150 students in Year 9. Information was collected pertaining to uptake of, and knowledge of social networking tools and podcasting. In order to collect data, a survey was designed asking students to rate themselves on their ability to use tools such as wikis, online chats, blogging, online games, networking sites and electronic mail. Results showed that usage of some tools such as blogs and wikis was minimal. These outcomes provide the researchers with valuable insights into the potential for uptake of web 2.0 tools in the classroom

Keywords: net generation, digital natives, y generation, web 2.0, secondary education, regional, rural

### Introduction: Rationale for the study

As Web 2.0 brings a new wave of interaction, connectivity and communication, educators still have to ask how and why popular social networking tools can be used to support learning. The emerging literature on “the Facebook generation” Steele & Cheater (2008) indicates that there is a global surge in the uptake of social networking tools that enable students to connect and collaborate with each other in variety of ways. Evidence suggests in Australia, the UK and USA, many students at university and at high school are using a raft of Web 2.0 applications. Green & Hannon (2007). The use of social software tools holds particular promise for the creation of learning settings that can interest and motivate learners and support their engagement, while at the same time addressing the social elements of effective learning (Kvavik, 2005).

The current investigation into the practices and attitudes of young people towards digital tools takes place in the context of a project funded by the National Centre for (*Innovative Technology etc*) that is researching ways to integrate Web 2.0 and social networking tools into rural and remote schools. It was considered necessary to obtain a baseline of what the attitudes and practices in using digital technologies was among the students in the target school. The objective was to gain an understanding of what ICT tools young people are using in order to enable school leaders to build on, and integrate these tools into the learning environment.

The school is classified as a rural school and has a total population of about 1,000 students. The geographical area where the school is located is a hub of agribusiness, agriculture, agronomy, animal production, equine management, horticulture, irrigation and food processing. Many of the students in this regional school are first-generation learners studying up to Year 10/12. Feeder students come from as far as 60 kilometres away.

Our objective was not to identify “good” or “bad” ways of using technology, but to describe students’ familiarity and practices with social software tools from their perspective.

## Characteristics of digital generation learners: Where and how do they learn?

The digital natives, a term introduced by Prensky (2001) are also known as Generation Y, of whom it is written: Technology has played an important part in empowering them. About three-quarters of Gen Ys regularly use the internet. They are the most educated-minded generation in history and are more optimistic about life and work than their predecessors, Generation X (Patterson, 2008).

Holley (2008) states that youth born after 1990 are currently the largest generation in the last 50 years and live in a technology saturated world with tools such as mobile phones and instant access to information, and that they have become avid adopters of Web 2.0 technologies such as podcasting, social networking, instant messaging, mobile video/gaming, IPTV and many others. Being the first generation to grow up surrounded by digital media, their expectations of connectivity are high, with technology everywhere in the home, school, factory and work environment. Today's young people think of technology as part of the natural landscape in which they live, work and play (Allen, 2004). However, lack of agreement on age ranges for Generation Y means that data collected from different surveys on could mean that anyone born between 1980 and 2003 are included. Earlier research with university undergraduate students may also have targeted the 'cuspers', who are people who were born early in a generation and have taken on some the characteristics of the preceding generation, or were born late in the generation and have adopted some of the characteristics of the next generation. (Perillo, 2007). For our purposes, we used the age range 1990 onwards, as most high school students were born in these years.

Several papers have been published arguing that Generation Y students are not expert users of technology (Kennedy et al., 2007; Kennedy et al., 2006; Kvavik, 2005), while Ramey (2008) has studied the attitudes of 1,232 American undergraduate students based on attributes proposed by several authors (Howe & Strauss, 2003). The characteristics that mark the new generation of students as different are that they multi-task, have an information age mindset, like to stay connected, have zero tolerance for delays, prefer doing rather than knowing, consider 'reality' no longer real, maintain that consumer/creator lines are blurred, and expect ubiquitous access to the web (Frاند, 2000; Oblinger & Oblinger, 2005).

Thus, there has been a call to action for universities and schools to prepare themselves for Generation Y students and the digital competencies they require in work published by numerous researchers (Allen, 2004; Gardner, 2006; Howe & Strauss, 2003; Wyn & Woodman, 2006). These and many others internationally, have added an emphasis on the need for readiness to develop the digital literacy skills for a globally connected world (Alexander, 2006; Barnes & Tynan, 2007). There is a new literacy of information navigation - to know how to navigate through confusing and complex information spaces. This is transcending the ability to use a search engine - it is also about the other ways that pointers to knowledge arise in technical and social forms (eg blogs, wikis, RSS) (Grant, 2007).

## Methodology

As the aim of the study was to gather information about the attitudes and habits of a cohort of regional high school students in year 9, a survey was designed. To this end we designed a questionnaire that asked students about the frequency of use of social software tools and services (podcasting, RSS, wikis and blogs) per week and then to rate their own proficiency on a scale of 'very good', 'good', 'average', 'poor' or 'don't know'. The questionnaire also asked students a variety of other questions about the use of Web 2.0 tools - how and why they used them, what they downloaded and when they listened to podcasts. A total of 150 students (64 males and 86 females) in the school participated in this survey. We included email as part of the questions asked because an email account is provided to every student by the NSW Department of Education and Training, and we considered the question important in profiling students.

## Findings

*Net Access:* The Australian Bureau of Statistics (ABS) reports that the uptake rate for Internet in 2006 (broadband and dialup) in the town community is 57%. ABS statistics indicate that broadband was found in 36% of the homes while 21% used a dial up service (Statistics, 2006). In our survey, 92.6% of the students surveyed had access to a dialup, broadband and satellite internet. Of female students surveyed, 83.7% had a broadband connection at home compared to 78.1% of male students. This survey found that Internet access from home as evidenced in this survey was remarkably high compared to the ABS figures of 2006.

*Web 2.0 Use:* The survey asked students to rate their familiarity with five different types of software from the Web 2.0 suite and with electronic mail. The distribution of the self rating scores (by percentage) is shown in Table 1.

**Table 1: Student familiarity with Web 2.0 tools and email**

Software	Familiarity Rating (%)	Very Good	Good	Average	Poor	Don't Know
Wikis	Male	16.1	4.8	11.3	12.9	54.8
	Female	11.5	10.3	16.1	10.3	51.7
Blogs	Male	4.8	16.1	12.9	21.0	45.2
	Female	12.8	11.6	25.6	15.1	34.9
Chat	Male	27.4	40.3	4.8	9.7	17.7
	Female	52.9	33.3	6.9	1.1	5.7
Games	Male	34.4	18.1	23.0	16.4	8.2
	Female	12.6	12.6	28.7	23.0	23.0
Social Networking	Male	25.8	22.6	11.3	12.9	27.4
	Female	51.2	26.8	12.2	1.2	8.5
Email	Male	27.4	22.6	12.9	21.0	16.1
	Female	34.9	32.6	23.3	8.1	1.2

To summarise the findings from Table 1, the self-rating scores on familiarity with blogs, wikis, games and social networking tools the indicated that:

1. The majority of male and female students say that they do not know much about wikis.
2. Familiarity with blogs is only marginally better than for wikis, with female students rating themselves better for familiarity with blogging than male students.
3. In the area of instant messaging and chat applications, more than half of the female students rate themselves highly on knowledge and use of chatting software. Overall, the female students surveyed were more familiar with chat applications than the male students.
4. In the area of internet gaming (also on-line gaming), males rate themselves much better in the knowledge and operations of these games on the Internet. 23% of the females surveyed said that they do not know about internet gaming.
5. The female students rated themselves highly using social networking software such as Facebook, Bebo, MySpace and others. 78% of females said that they had good or very good familiarity with social networking software, compared to only 48% of males.
6. Overall familiarity with email was good, with 68% of females and 50% of males saying that they had good or very good familiarity with email. Again, females rated themselves better than males, and 37% of males indicated poor familiarity or uncertainty with email.

**Table 2: Frequency of use of Web 2.0 by participants**

Software	Usage (times/week)	0	1	2	3	4	5	6	7
Wikis	Male	53.2	19.4	4.8	6.5	9.7	0.0	0.0	6.5
	Female	53.4	25.0	3.4	4.5	5.7	2.3	1.1	4.5
Blogs	Male	46.7	25.0	8.3	3.3	11.7	0.0	0.0	5.0
	Female	43.0	14.0	12.8	5.8	14.0	1.2	4.7	4.7
Chat	Male	22.6	17.7	8.1	6.5	12.9	6.5	6.5	19.4
	Female	7.4	5.3	4.2	10.5	21.1	12.6	14.7	24.2
Games	Male	12.9	27.4	16.1	8.1	6.5	4.8	3.2	21.0
	Female	35.6	28.7	13.8	8.0	6.9	1.1	3.4	2.3
Social Networking	Male	30.6	12.9	4.8	8.1	9.7	1.6	8.1	24.2
	Female	10.2	8.0	5.7	4.5	11.4	8.0	18.2	34.1
Email	Male	17.7	24.2	6.5	14.5	4.8	8.1	3.2	21.0
	Female	3.5	16.3	9.3	10.5	17.4	14.0	12.8	16.3

*Usage patterns:* The respondents were also asked to indicate their frequency in the use of Web 2.0 tools (0 to 7 times per week). Table 2 summarises the responses of participants to their usage of tools such as blogs, wikis, podcasts and social networking tools.

In summary, the self rating scores on usage of the Web 2.0 suite were consistent with the scores on familiarity and indicated that:

1. The high number indicating non-usage or low-use and participation of wikis correlates with respondents' self-rating of low knowledge about wikis. This is consistent among both male and female students.
2. The data above suggests slightly more than half the students are involved in some form of blogging activity. Of those who blog, the majority only blog 1-2 times a week. Usage is similar for both male and female students.
3. Female students reported chatting online more than 3 times per week, whereas 22.6% of male students don't get involved in on-line chatting.
4. The male students dominate the online gaming scene – either playing daily or 1-2 times a week. The majority of female students use online gaming less than once a week.
5. Social networking is dominated by female students, with the majority of females using networking 6-7 times a week. Both male and female students either use social networking on a regular basis.
6. The usage of email varies. Male students were most likely to use email once, thrice or seven times a week (these being the three highest frequencies) and female students were most likely to use email once, four or seven times a week. Notably, 18% of males indicated that they do not use email at all.

## Conclusion and future work

Though the methodology has limitations insofar as it used only a simple questionnaire, the data obtained was a valuable insight into the familiarity of students with Web 2.0 tools. The results of the questionnaire highlight a number of important aspects relating to students' usage and knowledge about email and Web 2.0 applications. The poll asked students a number of general questions relating to their use of the web as a means of understanding their level of competence with digital technology and how it fits into their everyday lives. The general opinion expressed towards using social software is positive, though some degree of inexperience and hesitancy was noted in the use of blogs and wikis. These results highlight the following issues of concern:

- Overall, students have low familiarity with wikis and blogs and may require assistance in creating and using this software.
- Female self-ratings on usage of social networking, on-line chatting software and email were generally higher than the males'.
- Males rated themselves better in the on-line gaming environment but required more help using social networking, on-line chatting software and email applications.

Overall the survey reveals that we cannot assume that students know how to use the tools, and that is a skill that must be developed before exploiting the potential of social software tools for learning. This study has helped the school administration understand net and email access as well as the pattern of usage among Year 9 students. Initiatives to step up the integration and use of some of these tools (eg. podcasting and model) has begun, and students are encouraged to learn how to blog and familiarise their peers who have not been exposed to this collaborative environment.

The next phase of this work is to identify suitable areas of learning in which Web 2.0 technologies can be incorporated into the teaching-learning schema, in addition to up skilling students in basics IT skills. Subsequent observations with various groups of students will offer an insight into these questions and create standards for best practice in implementing Web 2.0 technologies in a high school environment.

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