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EXPLORATORY STUDY INTO THE PERCEPTIONS OF KNOWLEDGE SOURCES AND KNOWLEDGE USES AMONG STUDENTS

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ABSTRACT

In 2007 an explorative, quantitative survey among students from the AUT University, Manukau Business School (MIT) and the University of Canterbury was undertaken to determine their perceptions of knowledge, knowledge sources and knowledge ownership. A few of the initial key findings are presented in this paper.

The results provide insight into students' use of the Internet as a knowledge source and of other, more traditional information and knowledge sources. Although several trends appear to be emerging from this research such as an age bias towards the use of knowledge sources (including the Internet), general use seems to be highly personal and varied.

Perceptions of reliability and citing sources for academic work were often shaped by tutors

and tutors' perceptions of source reliability, indicating a need for educational leadership from tutors in providing guidelines regarding the reliability of emerging sources such as podcasts, video podcasts (vodcasts), blogs and wikipages.

Overall, this exploratory research raises several new and interesting questions, pointing the way for further in-depth research in the area and as such adding to the body of knowledge of Communication.

INTRODUCTION

This paper contains some of the key findings of a collaborative, exploratory research project conducted by researchers from the AUT University, Manukau Business School (MIT) and the University of Canterbury on perceptions and uses of knowledge sources – in particular the Internet as a key knowledge enabler and knowledge source. This is a largely dynamic research field where the interaction and relationship between individuals and Information and Communication Technologies (ICTs) is paramount, as is the context in which the interaction and relationship takes place.

The aim of this study is to provide a starting point to identify potential areas of further research and investigation as well as promote discussion and debate in this field. It also identifies relevant trends and associated areas of common interest but makes no claim to provide definitive answers on the Internet as a key knowledge enabler and knowledge source.

RESEARCH METHOD

A questionnaire survey containing a combination of 27 open and closed questions was designed to test the respondents' perceptions of knowledge ownership, their use of a selective number of knowledge sources and their perceptions of the reliability of these sources.

Low risk ethical approval was obtained from the AUT Ethics Committee as well as the Ethics Committees of Manukau Institute of Technology and the University of Canterbury, and the questionnaire was then administered to groups of students based on a convenience sample.

The raw data was subsequently entered into the statistical software package, SPSS, analyzed and interpreted using a variety of descriptive and inferential statistical methods, such as the bivariate Pearson correlation coefficient and the independent samples T-test.

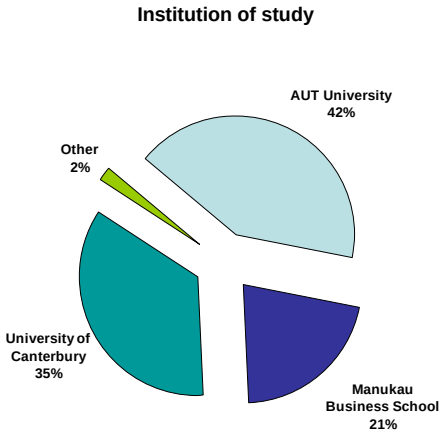
This paper reports on some of the initial key relationships identified by means of these tests.

RESULTS

Profile of respondents

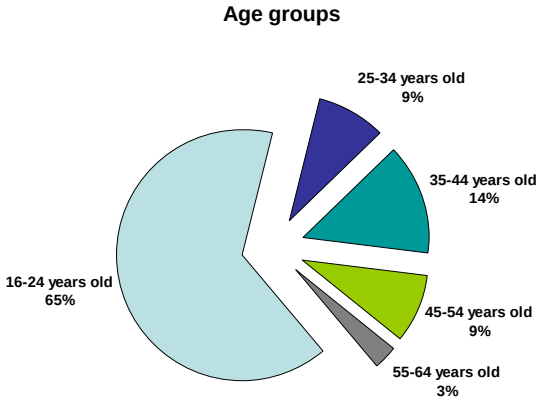
A total of 100 respondents from AUT University, MIT and University of Canterbury participated in this survey. Of these, 42% of the respondents were from AUT University, 21% from the Manukau Business School and 35% from the University of

Canterbury. Another 2% indicated that they were associated with another institution, such as the Southern Cross University.



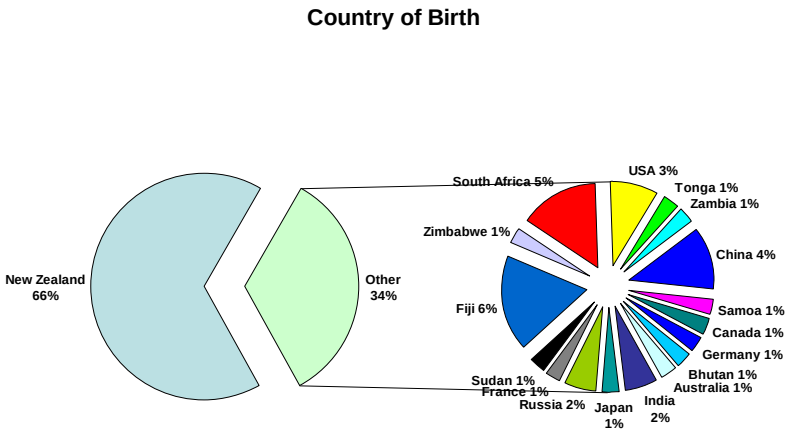
Unfortunately, the gender distribution among the respondents was fairly uneven with 24% male and 76% female.

The majority of respondents was in the 16-24 age bracket (65%) with the second largest group (14%) 35-44 years of age, followed by those 25-34 (9%) and 45-54 years old (9%) respectively. An additional 3% were in the 55-64 age bracket. No respondents were older than 65.



In terms of culture, 67% of respondents were born in New Zealand. The remainder were born in other countries: Fiji (6%), South Africa (5%), China (4%), USA (3%), India (2%), Russia (2%) and 1% each from Japan, France, Sudan, Zimbabwe, USA, Tonga, Zambia, Germany, Bhutan, Australia, Canada and Samoa. Not surprisingly, most respondents identified themselves as New Zealander, New Zealand Pakeha and/or New Zealand Maori.

Many who were not born in New Zealand also identified themselves partially or fully as New Zealand Pakeha or New Zealand Maori.

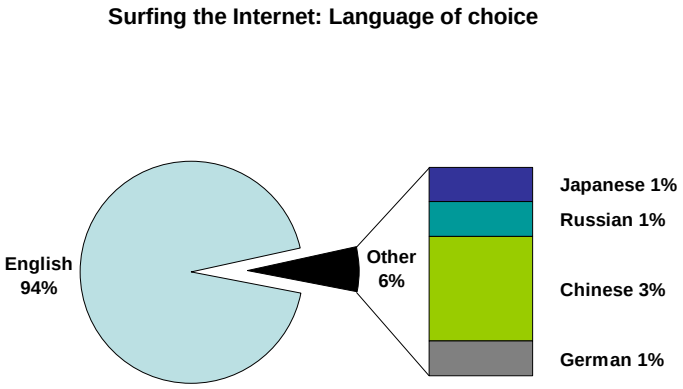


Internet use

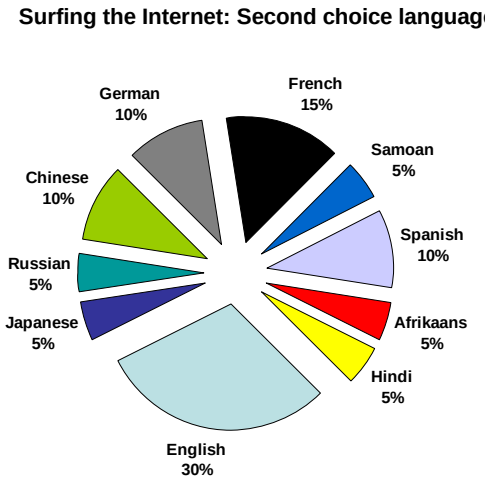
Preferred language for surfing

Respondents were asked to identify and rank the language or languages they preferred using when surfing the Internet.

Given the profile of the students it was hardly surprising to find that the preferred language for surfing the Internet was English (89%), followed by Chinese (3%) and German, Russian and Japanese (1% each) respectively.

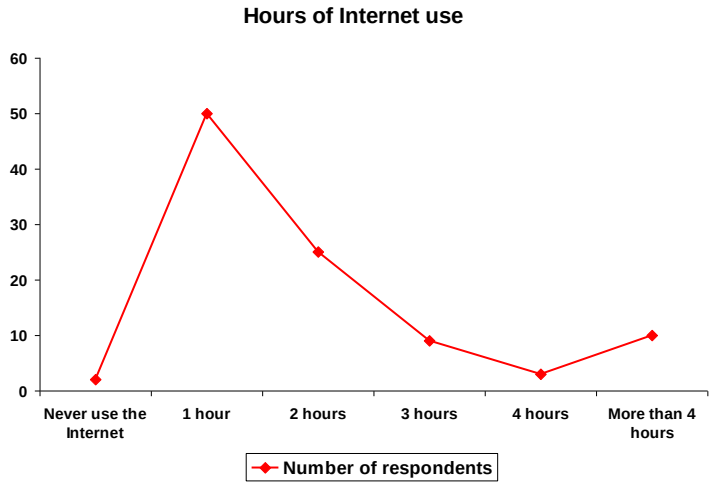


English was also the major second choice (at 6%) for those who preferred other languages, followed by French (3%), Chinese, German and Spanish (2% respectively) and then Japanese, Russian, Samoan and Afrikaans (1% each). It seemed, therefore, that the perception that the Internet is dominated by English still holds true.



Time spent on the Internet

Contrary to popular belief, students did not spend their whole day surfing the Internet. Half of respondents limited their time on the Internet to one hour per day (50%) and a quarter (25%) indicated that they spent up to two hours a day surfing the Internet.



However, instead of a steady and consistent proportional increase of time spent on the Internet, it unexpectedly jumped to more than 4 hours (10% of respondents) before

dropping back to 3 hours (9%) and 4 hours (3%) respectively. Another 2% of respondents claimed to never use the Internet. A few indicated that it would depend on whether they were conducting research for an assignment, and a few stated that they spent little time on the Internet – mainly checking their emails.

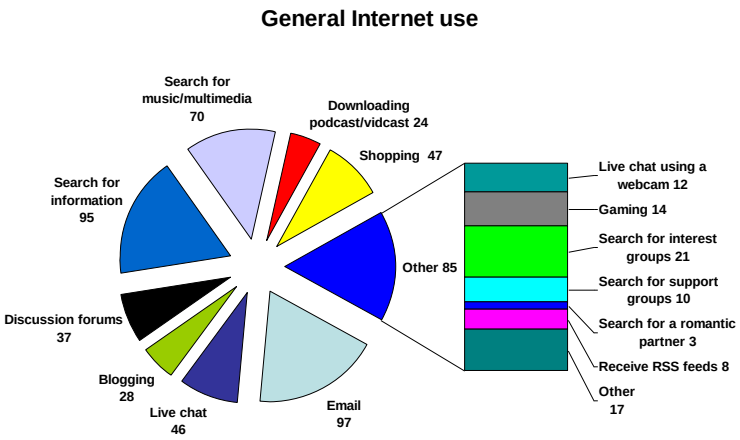
No direct correlation was found between age and gender and the hours spent on the Internet. However, respondents' perceptions of the Internet did influence their use (which was influenced by age) and it could therefore be argued that age did have an indirect impact on hours spent on the Internet.

A significant correlation was also found between the hours of Internet use and using it for live chat with a webcam, and there seemed to be a relationship – albeit not a strong one – between the hours of Internet use and gaming. Both of these latter uses had a weak but significant relationship with gender (see "The impact of gender").

Overall, the hours of use had little impact on their use of the Internet but it did seem to impact on their perceptions of the Internet. For instance, the more hours respondents spent surfing the Internet, the more they were likely to view it as a place for exchanging ideas, and thus a social networking place, and *vice versa*.

Overall use of the Internet

The overall use of the Internet was varied and highly personalized, confirming existing uses and gratification theories. The three most common uses were to use it for searching for information (95%), sending and receiving emails (97%) and searching for multimedia/music (70%). These were followed by shopping (47%), live chat (46%), participating in/searching for discussion forums on topics of interest (37%), blogging (28%) and downloading podcasts or vodcasts (24%).



The Internet as a social networking place

Respondents were asked to rate a number of statements based on how they perceived the Internet. These were correlated with their use of the Internet, hours spent on the Internet, age and gender.

Perceiving the Internet as a place to exchange ideas correlated positively with seeing the Internet as a place to meet people and it being a networking environment. In other words, respondents who felt that the Internet was a place to exchange ideas were also more likely to perceive the Internet as a place to meet people and it being a social setting. Respondents listed social networking sites such as Bebo and MySpace as "other" uses of the Internet. Bebo was particularly popular among younger respondents.

Respondents who perceived the Internet as a place to meet people were inclined to use the Internet for discussion forums on topics of interest – a correlation was found between using the Internet for the latter and perceiving it as being a place to exchange ideas, and thus a social networking place.

Furthermore, respondents who used the Internet for discussion forums on topics of interest also used it to search for interest groups and support groups.

The Internet as a place to conduct business

Furthermore, it was apparent that the Internet was not only perceived as a social networking place – it was also a place to conduct business and to shop.

Not surprisingly, a relationship was found between perceiving the Internet as a place to conduct business and it being a place to shop as well as using it for shopping online. Shopping online was not influenced by gender or age – it seemed that male and female of all ages shopped online.

The Internet as a source of entertainment and information

Respondents who perceived the Internet as a place to conduct business, also tended to see it as a source of entertainment and information, and if they did, they were likely to use it for searching for multimedia and music as well as meeting people.

The impact of age

In order to simplify analysis of the sample and identify broad trends, the respondents were re-grouped into those under 25 years of age and those over 25 years of age. It was hypothesized that with current technology reaching hitherto unseen potential, the "new generation" would be more technologically adept than those in the older age bracket as they were more likely to have grown up with access to these new technologies. A similar exercise was repeated by grouping respondents into another group: those under 35 years of age and those over 35 years of age. In both cases a T-test found differences between the age groups and their Internet use and perceptions thereof. Although not conclusive, these differences may point towards a generational shift occurring in the use of knowledge sources, holding significant implications for teaching and communication-related industries such as marketing, public relations and advertising.

Age, for instance, played a role in perceiving the Internet as a source of entertainment. Those over 35 were less likely to view the Internet as a source of entertainment than those under 35. It is thus fair to argue that respondents over 35 years of age used the Internet more as a functional (often work-related) tool than a social tool.

A cross tabulation of age and using the internet for live chat pointed towards another difference between these two age groups. Percentage-wise, for instance, those over the age of 35 were much less likely to use the Internet for live chat (23% compared to 55% of those younger than 35). It appeared that the older the person, the less likely they were to use the Internet for live chat, which is corroborated with observations of school-going children and their use of e.g. chat facilities on popular convergence sites such as *Club Penguin*. It can even be postulated that typing familiarity and speed (required for live chat) of the general population is greater among the younger generation than the generation that grew up with only limited access or need for typing skills (as they were not an everyday functional requirement for work or social networking). These would need further investigation, though.

A study, BRANDchild[1], showed that 24% of tweens globally (8-14 at the time of the study)[2] used the Internet as a primary tool of communication, ahead of face-to-face (Lindstrom, 2004). In the study, 21% of these tweens indicated that making new friends was easier on the Internet. The non-threatening nature of 'cartoon' like chat environments such as Club Penguin, together with 'moderator' safety nets and real-time supervision, may contribute to this phenomenon.

A correlation between age and searching for music and multimedia as well as downloading podcasts and vodcasts was also found, indicating that age may have an impact on these activities too. Younger respondents were more likely to engage in these activities than the older respondents. In fact, none of respondents in the age group 35-44 downloaded podcasts or vodcasts although just over half of this age group did search for music and multimedia online. It could be that older respondents were simply not that familiar with the newer technologies or had other interests that did not involve the Internet. Podcasts and vodcasts are fairly recent developments, coinciding with the emergence of the social media.

Age also had an impact on which sources of information and knowledge were viewed as reliable. A correlation between age and the overall reliability of online and print newspapers/magazines was found. It appeared that older respondents (those over 25 years of age) were inclined to rate print newspapers and magazines as more reliable whereas those under 25 years of age were more inclined to rate online newspapers and magazines as more reliable. In reality, reliability of online and print newspapers is a moot point since many reputable print magazines and newspapers have online versions. Thus, there should be no difference in reliability. However, this finding does point towards a shift in perception: those growing up with the Internet are perhaps less skeptical of its content, more familiar with cues that indicate a source's reliability and just more familiar with technology overall, seeing it as more reliable and accessible, preferring it above other

[1] The study BRANDchild was completed in 2003 and involved more than 600 people in 15 countries (http://www.brandchild.com).

[2] The upper portion of these tweens would now be in the 16-24 years age group, i.e. 16-18 years of age.

sources.

The impact of gender

No significant correlations were found between gender and Internet use, and there were no discernible differences between male and female perceptions of the Internet even though weak correlations were found between gender and using live chat with a webcam as well as gaming. These findings may confirm common perception that males are more likely to engage in online gaming and females are more "social". However, this is purely speculative and requires further study as the study was biased towards females.

Academic sources and reliability of sources

Students had clear preferences with regard to sources that they cited for academic work. From their comments it was apparent that their choices were strongly influenced by their tutors, and it was also evident that they did not always agree with their tutors. A consistent bone of contention was the use of Wikipedia, which some felt was reliable, while others felt it wasn't – sometimes simply because their tutor said so, citing the fact that "anyone can add information" to the site and that there is no "peer review". A few lamented the fact that they were allowed to use Wikipedia at school but not at university, which seems to point towards an incongruence in bridging respondents into university education.

Many were unsure what "wikipages"[3] referred to and put it into the same category as "Wikipedia". As a result, a strong correlation was found between using Wikipedia for academic work and wikipages.

Respondents' views whether or not a source was reliable clearly determined whether they would use these for academic work. Not surprisingly, a positive correlation was identified between seeing Wikipedia as reliable and citing wikipages and Wikipedia respectively for academic work and *vice-versa.*

Also, if they saw Wikipedia as reliable, they were more likely to view blogs and podcasts/vodcasts as reliable sources of knowledge too, which may indicate that a greater exposure to contemporary ICTs reinforced the belief in their reliability and relevance. This is corroborated by the fact that the more time respondents spent on the Internet, the more likely they were to view Wikipedia as a reliable source, and the more likely they were to cite from it (and from blogs) for their academic work. Thus, hours of Internet appeared to have some impact on how they perceived these knowledge sources.

In line with earlier findings about age groups and Internet use, respondents who used educational or academic sites were also likely to use online academic journals – more so than using hard copy academic journals. One respondent commented that it was simply easier to access these journals online. The issue of easy access may thus be more pertinent in this case than perceived reliability.

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[3] A wiki is an online collaborative tool that allows participants to edit and add content through a simple browser (http://mobileman.projects.supsi.ch/glossary.html). A wikipage is the result of such online collaborative work and is currently adopted by companies to share information and knowledge and improve internal communication.

Overall, though, respondents used a mix of sources when citing their academic work even though there were tendencies among these respondents to prefer certain sites or sources for academic work.

Respondents who were likely to cite a print newspaper were also likely to cite online newspapers. In addition, respondents who were likely to cite from podcasts or vodcasts were likely to cite from business sites and blogs too. In fact, a significant correlation was found between the perceived reliability of a podcast/vodcast and seeing blogs as reliable sources of information.

Another interesting finding was that respondents who viewed radio as reliable were likely to view television as reliable too. Both are "traditional" sources of knowledge and information, having established a reputation for reliability, and both showed significant correlations of reliability with newspapers and magazines (online and print) and internet websites. All of these have established reputations of reliability.

Conclusions and recommendations

Although this research is merely exploratory in nature, some discernible trends have been identified.

Primarily, a growing divide between generations (age) regarding the use and reliability of various sources, such as more traditional, established sources vs. 'new' or 'emerging' ones, appears to be emerging. Familiarity with sources determines reliability, and impacts on how they are perceived. To ensure appropriate guidance, tutors will need to familiarize themselves with emerging knowledge and information sources and be aware of their own biases.

Podcasts, vodcasts, wikipages and Wikipedia have not yet built a sturdy record of reliability and in some cases these sources fall short of conventional measurements of reliability. New or adjusted measurements of reliability will need to be researched. One such method is sanctioning by the respective online communities.

However, it also needs to be pointed out that a convergence between the various sources is taking place. Many newspapers such as the New Zealand Herald have blogs that provide social and political commentary while news stations such as ABC World News and CNN have daily news vodcasts – the latter being of the same quality as the television news broadcasts. In these cases, traditional measurements for reliability and credibility may apply.

As the convergence continues many of the traditional sources may, over time, become redundant as they are superseded by new technological and socio-cultural developments. The extent of this shift and its impact on the next generation's perceptions is an area that needs to be studied in much more depth as it is likely to impact on current teaching and communication processes. Messages received through conventional or "traditional" channels may – in the long run – no longer have the desired effect and industries such as public relations, advertising and marketing will need to take even more care in tailoring messages to their audiences.

Areas for further research include:

- The nature of the generational shift and the impact on perceptions of source reliability, social networks, teaching and learning as well as communication-related industries.

- The existence of gender differences in using the Internet, e.g. for social networking and gaming, and the impact this may have on communication and society.

- The impact of social networking sites on communication and relationship-building.

If these changes are indeed occurring the impact on society and communication would be far-reaching.

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