Bridging the digital divide: Students’ access to digital technologies in a language department

Abstract

In many institutions in New Zealand from primary to tertiary level, the use of technology by both students and teachers to support learning and teaching is assumed. This article reports briefly on research done in a New Zealand tertiary institution in order to discover students’ perceptions of their access to and use of computer technologies. As well as giving a general overview of feedback from the 161 English as a Second or Other Language (ESOL) students in the study, responses are analysed in relation to age, gender and nationality groups. Results suggest that general access for students is high, but that differences exist in relation to gender and nationality. Such individual differences must always be considered by classroom teachers and accounted for as much as possible, as teachers continue to integrate technology use into their classroom practice.

Keywords: access; usage; equity; technology

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Introduction

For ESOL teachers, the word ‘native’ probably collocates more comfortably with ‘speaker’ as in ‘native speaker’, rather than with the adjective ‘digital’. However, Prensky (2005) has popularized the term ‘digital native’, and suggests that as teachers we need to work towards integrating our students’ already existing knowledge of and access to digital tools/technologies into classroom practice. In traditional ESOL classes with students from a wide variety of backgrounds and ages, we cannot assume that our students are ‘digital natives’.

Another frequent collocation with digital is the phrase ‘digital divide’. This suggests that there is a divide between those with physical access to computers and those who do not enjoy the same access. Warschauer (2002) critiques and disputes this simplistic notion for several reasons, suggesting instead the concept of ‘technology for social inclusion’, which focuses as much on access to the resources which allow people to use technology well. For those students of ESOL who are actual (as opposed to digital) immigrants to a new country, and particularly for those having refugee status when they arrive in New Zealand, facility with or even access to digital technology and support resources is not something that can be assumed.

This paper reports on results of a survey of students of English language at a New Zealand tertiary institution, with a specific focus on students’ levels of access. Establishing the degree of access that our students have to computers as well as their attitudes towards the use of digital technology in language learning can inform the expectations that we have of students and their computer use across all the sectors involved in ESOL teaching, and may also help us to see potential that our teaching can exploit. It should be noted that the survey was conducted in 2006 and reflects the technologies that were prevalent at that time. Four years later, one would assume that students’ general access levels might be higher, or that mobile devices and social networking technologies might have more prominence in language classrooms. However, the trends evident from this research, particularly in relation to gender and ethnic differentiation in access, may continue to be relevant as new technologies appear, then are adopted and adapted for educational use.

Literature review

Student access to technology is clearly increasing. A 2004 study (Kvavik, 2005) of more than 4000 mainstream college students in the USA suggests that “there is an inexorable trend among college students to universal ownership, mobility and access to technology” (p. 5). In his study, 93.4% of students owned a computer and all students had internet access. Similarly, in the UK, Saunders and Pincas (2004) found that 81% of tertiary students had access to a personal computer off campus, while 97% described themselves as regular email users. A more recent survey of young people generally, rather than just college students, shows that 93% of young adults (aged 18–29) in America use the internet (n.g., 2010).

More locally, Lloyd (2005) quotes figures from Australian research from 2003 which show that nearly 85% of students have access to computers at home every day, while only 9% are reported to never have access to computers at home. Two years later, Oliver and Goerke (2007) surveyed first year English and business students in Australia, and found that over 90% used online resources for study purposes, but also suggested that, while there was a growth in students’ general use of social networking, the use was not for study purposes. In a
later study by Kennedy, Judd, Churchward, Gray and Krause (2008) of over 2000 Australian first year university students, 34.9% of whom were from a non-English speaking background, almost 90% of students said they had unrestricted access to desktop computers. Only 0.6% of students had no access to either a desktop or laptop. However, this research also warns that tertiary students have varying levels of access and that there is a “lack of homogeneity in the incoming first year students’ population with regards to technology and a potential ‘digital divide’ between students within a cohort of a single year level” (p. 10). More recently, in South Africa, Thinyane (2010) notes that the student body of first years across two universities was heterogenous in relation to technology access and use. While computer access seems to be on the increase in general for tertiary students, we cannot automatically assume that, for all students, the use of computers for study purposes is normal.

Warschauer (2002) argues that thinking about access from the viewpoint of social inclusion is perhaps more useful than identifying a digital divide. He compares digital access to literacy acquisition:

There is not one type of access but many; the meaning and value of access varies in particular social context; access exists in gradations, rather than in a bipolar opposition; computer and Internet use bring no automatic benefit outside of particular functions; [Information and Communications Technology] ICT use is a social practice involving access to physical artifacts, content, skills and social support; and acquisition of ICT access is a matter not only of education, but also of power (para. 47).

While access is important, Warschauer and Matuchniak (2010) are now discussing how access, use, and outcomes are, in fact, closely intertwined and the definition and challenge of the digital divide has been refined and broadened.

Today the digital divide resides in differential ability to use new media to critically evaluate information, analyze, and interpret data, attack complex problems, test innovative solutions, manage multifaceted projects, collaborate with others in knowledge production, and communicate effectively to diverse audiences (p. 213).

They suggest that, while the original divide can largely be resolved by students accessing computers and the Internet, this ‘second’ divide will be more difficult to bridge. They propose a 5-pronged attack, involving more than simply ensuring individual access, but also “curriculum and instruction, standardized assessment, out-of-school media programs and research” (p. 213).

For ESOL students, computer use is also on the rise. In a large scale research study of computer use with Test of English as a Foreign Language (TOEFL) examinees in the late nineties, Taylor, Jamieson and Eignor (2000) concluded that there was a notable increase in the use of computers, English word processing and the Internet over a period of 1 ½ years. In particular, for students sitting TOEFL exams in the area designated in the survey as Pacific Islands, Australia and New Zealand, the increase was largest - 14.1% increase in use over a period of 20 months. Taylor et al. (2000) recommend that while we can “assume that computer use among international students has increased, teachers in English for Academic Purposes (EAP) programmes should continue to assess, rather than assume, the computer familiarity of their students” (p. 584). In another study into online teaching in the Pacific, Rao and Giuliani (2010) note that teachers need to design and use specific structures to better
meet the needs of the students for “information, communication and interaction” (p. 153). They recommend that students have “opportunities for synchronous meetings either in person or virtually ... (to) bring students together ... (and) greatly enhance interactions and motivate students”, and that there should be “support structures for students with key personnel who are connected to students and who remain with them over the course of the program”. This desire for some face-to-face contact along with internet support is echoed by a study by Miliszewska (2007) of Australian transnational education in Hong Kong.

Levy and Stockwell (2006) suggest that the first step to normalizing the use of computers in the language learning classroom is easy access to the appropriate technologies when they are required. Our research was designed to investigate not only the level of access that ESOL students at one New Zealand tertiary institute have, but also to discover just how valuable they feel computer assisted language learning (CALL) is for their language learning.

Previous studies into CALL in NZ have addressed how students perceive the use of computers in language classrooms. Ayres (2002) suggests that tertiary learners appreciate and value highly the learning that they do using the computers. The majority of students in his study found CALL easy to use (68%) and relevant (80%). In another study, Cartner (2004) dealing with similar students and levels found that 81% of students felt that studying with computers improves their English while 74% said computers were easy to use. More recently, Al-Maini, (2009) suggests that, for students from Saudi Arabia, of whom there is a significant increase in some of our programmes “there is anecdotal evidence from supervisors, students and teachers who have experienced EFL[English as a Foreign Language] teaching with ICT that student participation is increased, and motivation and learning enhanced” (p.32).

From a language teaching perspective, Coryell and Chlup (2007), for instance, found that “serving English language learners in (distance learning) programs poses particular challenges in providing language acquisition and technology skills instruction concurrently” and suggest that there is an “essential need to gain buy-in from all users in the program for technology’s use” (pp. 274-275). Lodge (2010) found that students preferred “not to communicate with or receive communication from the university about academic or administrative issues” (p. 103), via social networking media, except for reminders - they would rather receive important messages through email or directly from staff.

As teachers we recognize that our ESOL students are very much individuals. Their ‘journeys’ to NZ and into our classes may vary hugely. The students in our survey come from a vast array of different backgrounds in terms of experience and education. Warschauer and Matuchniak (2010) look specifically at some of these aspects in relation to computer access and youth in the US and remind us that “differences by race/ethnicity are not as large as by education or income but are still troubling” (p. 183). Race and ethnicity, therefore, may well be factors distinguishing levels of access. Our students’ current situations vary considerably as well, whether it be their family circumstances, their income bracket or the length of time they have been in NZ and their degree of acculturation to a new society. The discussion in this paper in no way attempts to gloss over these disparate experiences and circumstances but, in relation to student access and use, considers age, gender and nationality, which are three aspects of what Zimmerman (1998) refers to as features of ‘transportable’ identity.
Methodology

Participants

The 161 participants in this survey were English language students enrolled in certificate and diploma level courses in Semester 2, 2006. Of these students 55% were female, and 39% of the respondents were under the age of 25. In the survey 71% of students were Asian, while other areas represented included Africa (8%) and the Middle East (8%).

Instrument

In compiling the questionnaire, reference was made to other (unpublished) university in-house survey tools to ensure that an appropriate range of digital tools was included. As well, earlier research done in Auckland tertiary institutions with language students (Ayres, 2002; Cartner, 2004) proved useful as a starting point for attitudinal questions. General research questions were

- What kinds of technology do our students have access to (both at home and on campus)?
- What kinds of technology do they make use of for language learning?
- What kinds of technology would they like to use to support their language learning?

The questionnaire was in English so all students who took part in the survey were at an Intermediate level of proficiency or higher, in order to minimize problems with comprehension as much as possible. A pilot study conducted with one class enabled the questionnaires to be made easier for students to understand. As well, a coloured glossary page was developed which included pictures and/or explanations of some of the technologies referred to in the questionnaire to further assist students in completing the survey fully and accurately.

Data collection

Teachers of students at Intermediate level or higher in the language department of the institution were asked to participate in the research. The sample of 161 students came from the classes of these teachers, who allowed the researchers access to their class in the final ten minutes of one lesson. Students were encouraged to participate by their teachers and most questionnaires were distributed and returned on the same day, with the class teacher as well as one of the researchers being present to answer any queries.

Findings

Access to a computer

As can be seen in Table 1, 80% of these students own their own computer. Of these, over half own laptops, with 84% of all respondents having access to a computer at their home. Computer labs provide access on campus for those students who do not own a computer. Five computer labs with 24 computers in each are open at different times over a week for scheduled classes and for individual drop-ins.
Table 1: Computer access and ownership

<table>
<thead>
<tr>
<th></th>
<th>Computer where you live (%)</th>
<th>Own computer (%)</th>
<th>Own laptop (% of computer ownership)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 161)</td>
<td>(n = 161)</td>
<td>(n = 128)</td>
</tr>
<tr>
<td>Students in general</td>
<td>84%</td>
<td>80</td>
<td>58</td>
</tr>
<tr>
<td>Country of origin (n = 161)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese (n = 82)</td>
<td>93</td>
<td>93</td>
<td>67</td>
</tr>
<tr>
<td>Korean (n = 25)</td>
<td>84</td>
<td>72</td>
<td>55</td>
</tr>
<tr>
<td>Middle Eastern (n = 13)</td>
<td>100</td>
<td>92</td>
<td>33</td>
</tr>
<tr>
<td>African (n = 13)</td>
<td>46</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Other nationalities (n = 28)</td>
<td>71</td>
<td>64</td>
<td>55</td>
</tr>
<tr>
<td>Gender (n = 161)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>79</td>
<td>79</td>
<td>65</td>
</tr>
<tr>
<td>Female</td>
<td>89</td>
<td>81</td>
<td>54</td>
</tr>
<tr>
<td>Age (n = 160)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 35 (n = 106)</td>
<td>83</td>
<td>77</td>
<td>61</td>
</tr>
<tr>
<td>35 and over (n = 54)</td>
<td>87</td>
<td>86</td>
<td>56</td>
</tr>
</tbody>
</table>

Table 2 shows that 45% agreed that there was enough drop-in lab time available on campus. Further breakdown of the data shows that almost half of the students used the drop-in labs more than once a week, and of the 23% that never used the lab for drop-in, almost 80% owned their own computers. In general, therefore, it seems that most students have access to computer technology either at home or on campus.

Table 2: Opinions about computer access

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is enough drop-in lab time in the SLS.</td>
<td>45%</td>
<td>31</td>
<td>24</td>
<td>2.77</td>
</tr>
<tr>
<td>Getting access to an Internet-connected computer is a problem for me.</td>
<td>15</td>
<td>16</td>
<td>69</td>
<td>3.77</td>
</tr>
<tr>
<td>I would like wireless access in the SLS.</td>
<td>55</td>
<td>37</td>
<td>8</td>
<td>2.38</td>
</tr>
</tbody>
</table>

However, there are clear differences relating to countries of origin in terms of computer ownership and home access. Students from the Middle East have the highest levels of access.
in their home (100%) while Chinese are most likely to own their own computer (93%), which has a 67% chance of being a laptop. None of the Africans in this survey owned their own laptop, while not quite half had access to a computer at home.

Gender differences are less marked, with computer ownership and access being reasonably similar for males and females. Women have better access at home, while laptop owners are more likely to be male than female.

As can be seen in Table 1, age seemed to make little difference to student ownership, although students over 35 are more likely to own their computer, which is less likely to be a laptop than for younger students.

Access to the internet

As shown in Table 2, when asked for their opinion as to whether accessing an internet-connected computer was a problem for them, 69% of students said that it was NOT an issue, while 15% agreed that it was a problem. In considering download time for material available online, it is interesting to note that just over half of the students said that they had broadband access at home.

Closer analysis of the statement about internet access (“Getting access to an Internet-connected computer is a problem for me”) in relation to gender, age and nationality suggests that getting access to an internet-connected computer was more of a problem for women than for men (twice as many women agreed as men). As well, only 10% of students under 35 years reported that it was a problem for them, while 23% of those over 35 felt it was difficult. Again, for Asian students, only around 10% felt it was a problem. However, almost a quarter of Middle Eastern students and just under a third of African students agreed that internet access was difficult for them. Taylor et al. (2000) note that “access to technology is not equal for subgroups. For example, although the survey respondents in most of the test center regions showed an increase in computer use in just a 20-month period, that use and the amount of increase were markedly less for African respondents” (p. 584). As this situation exists in their home countries, when these students come to New Zealand, they may need extra assistance with internet use.

Using the computer labs

The value of the computer labs is that they offer specialized language learning software as well as general computer and internet access. Almost a quarter of the students felt that more drop-in lab time would be useful. Of those, approximately a third did NOT own their own computer, but over 75% did have access at home.

Becoming more mobile

Over half the students in the study wanted wireless access within the school and 62% of these students already owned laptops. Ownership of mobile phones was high (72%), with 15% of students having access to the internet on their phones. Other mobile devices included mp3 players (46%) with almost three quarters of these devices including video.
General perceptions about technology

Table 3 shows that students clearly believe that technology helps them to learn language with 94% agreeing that this is true. Many respondents (81%) would like to use technology more in their language learning. This positive attitude was similar to Cartner’s (2004) study where 65% of the students felt that studying with computers should be used more in class.

In terms of finding computer use difficult, two thirds of students did not find this a problem while 57% said that using technological devices was NOT difficult. However, in analysing gender and age in relation to the students who were neutral or who agreed that using technological devices was difficult, again, it was clear that females were more likely to struggle with the technology, and being over 35 increased the likelihood that it would be a problem. While age did not seem to be a significant factor in the other statements in Table 3, men were generally more positive about the value of technology and wanted to use it more than the women in the study.

Table 3: Attitudes to technology use in general

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology helps me to learn language.</td>
<td>94%</td>
<td>5</td>
<td>1</td>
<td>3.79</td>
</tr>
<tr>
<td>I would like to use technology more in my language learning.</td>
<td>81</td>
<td>14</td>
<td>4</td>
<td>1.93</td>
</tr>
<tr>
<td>Using computers is difficult for me.</td>
<td>17</td>
<td>16</td>
<td>66</td>
<td>1.63</td>
</tr>
<tr>
<td>Using technological devices is difficult for me (eg. PDA/mobile phone/mp3 player).</td>
<td>19</td>
<td>24</td>
<td>57</td>
<td>3.54</td>
</tr>
</tbody>
</table>

Discussion

The original purpose of this part of our research was to discover the degree of access and use that students in this institution had in order to inform our pedagogical decisions with integrating technology into our classrooms. Kvavik (2005) comments that “student access to computing and narrowband networking has become nearly ubiquitous” (p. 21). For our participants, access seems quite high (80% ownership of computers overall with 85% of students having access at home), but it is certainly not ‘nearly ubiquitous’. In our study 15% of the students said they had difficulty getting access to an internet-connected computer.

It is also clear that for the students in this study, country of origin affects the degree of access and ownership to some extent. As well, from further cross-tabulation, it appears that those students who say they have problems with both access and using technology are more likely to be female or above 35. It is useful for teachers to be aware of these trends in considering students in individual classes and the expectations that teachers have of students’ computer use for class activities, homework and self-study. As well, it may be appropriate to consider workshops, peer-tutoring or one-on-one help for students who self-identify as wanting more training in the core computer skills.
Students in our study also seemed to value the drop-in labs, where they can access specialized language learning software. With increasing computer ownership, further research would do well to measure the value that such labs afford in the language learning process for students and relate this to the cost that labs incur for institutions. Lewis (1999) says that “the technology infrastructure of a university … will increasingly influence students in their choice of institution” (p. 26). We need to be more informed about our students’ attitudes to and use of such labs and their access to material off-campus. Indeed, while this comment is still applicable to our students in 2010, it should be noted that our institution (and others in New Zealand) are putting a lot of energy, time and financial investment into developing an eLearning component into all courses across the institution.

While our students seem generally positive about the value of technology for their language learning (94% agreed that technology helped language learning), they obviously feel that there is more potential for use (81%). Mobile access, for instance, is increasing and this can offer new opportunities for classroom practice. Student ownership of mobile phones for personal use (72%) was markedly more than those who used them as part of their language learning (10%). While mobile phone use is one of the new ICTs that could be useful, we need to be mindful of the research of Valk et al. (2010) who discovered that “while there is important evidence of mobile phones facilitating increased access, much less evidence exists as to how mobiles promote new learning” (p. 117). There may also be other barriers to successful use of mobile learning (mlearning) modalities, such as the cost of an appropriate device, the screen size, the quality of software and hardware, language barriers, student unfamiliarity with smartphone functions and a lack of mobile infrastructure (pp.134-135). On top of this, students need to be educated about the possibilities that mobile devices offer for their learning - only half of the students in this survey who used mp3 players were actually using them for language learning, although excellent podcasts exist for language learning.

A further example of potential opportunities for mlearning within this department was the observed absence of laptop use in actual classrooms. Students do not bring laptops into classrooms, even though a reasonable number own and use them (44% for personal use and 41% as part of their learning). For language learners, the use of mobile devices such as laptops and mobile phones in connection with social networking (through blogs and wikis) can be engaging and offer valuable experiences, although this study suggested that such Web 2.0 technologies generally were underutilized by teachers. While it is tempting to address this underuse by encouraging teachers to integrate these tools more into the curriculum, it is important to consider students’ own attitudes in regards to social networking. As mentioned previously, Lodge (2010) found that university students prefer important and/or official messages to be sent via email or through direct contact with staff.

However, teachers clearly play a critical role in the way that technologies are used in their classrooms. In response to increasing student access and ownership of digital technologies, and given students’ largely positive attitudes towards technology in this survey, teachers need appropriate professional development if they are to maximize the opportunities available for learning, both in and out of the classroom. This concurs with Anderson’s (2008) finding that, while students may have a distinct preference for online learning or blended learning, there is not the same uptake of online teaching. He suggests that this can lead to negative outcomes such as “missed educational opportunities, as well as disengagement of students” (p. 241). Reasons for the lack of teacher up-take included lack of time for preparation, insufficient technical infrastructure and copyright compliance, although positive student feedback did seem to encourage teachers.
However, while it is tempting to suggest that teachers’ use of technology for language learning purposes should exploit applications and tools that are available to us and our students, especially those that assist communication (Murray, 2000), an interrogative stance to the actual value of technology is crucial. Brown (2005), for instance, questions the robustness of the ‘digital native – digital immigrant’ dichotomy, and suggests that as teachers we need to critically question new digital technology as we seek to produce “an educated citizenry” (p. 5). Bennett, Maton and Kervin (2008) similarly suggest that young people’s relationships with technology are more complex than suggested by the digital native characterization, and that young people’s skills and use are not uniform.

In light of Coryell and Chlup’s (2007) discussion about the need for student ‘buy-in’ for the technology to be used most beneficially, teachers need to consider the technological ability and the motivation of their individual students, as well as to focus on the nature of their engagement with the tools available.

We can extend Warschauer’s (2002) premise that it is more useful to consider access from the standpoint of social inclusion than identifying the digital divide. Education as a negotiated and contextualized understanding is a social contract, in which teachers and learners need to be engaged as fellow members of society first, with technology being used to their mutual advantage. Our students’ access to technology may well continue to be less than ubiquitous in the immediate future. It is up to us as teachers (and to our schools) to ensure that access for our students is about being able to use the digital tools available to empower them in their learning.

As reported earlier, Warschauer and Matuchniak (2010) suggest that, while there is an ‘original’ divide that can largely be bridged by students gaining access to computers and the Internet, there is also a ‘second’ divide which needs a more complex and difficult 5-pronged attack, involving individual access as well as issues of curriculum and teaching, standardized assessment, media programs out of school hours and research. We found in our research that some of the students are still at the stage of the ‘original’ divide and need to have more equal individual access to computers and the Internet both at home and at school. Warschauer and Matuchniak suggest that the easiest way of managing this is a one-to-one laptop program which could embrace a school-private provider partnership for home broadband and public wireless access (p. 215) but note the “necessity of providing enhanced social support … if we are to seriously tackle inequity in use of technology and the outcomes associated with such use” (p.218). It should be noted that our institution is now setting up a system for computer loan, not just in the Library during school hours, but also for home use for those students who cannot otherwise have access to them. These students will now be enabled to move on, to bridging the ‘second’ divide.

Limitations of this research

While originally it was intended to do follow up one-to-one interviews with students selected on the basis of their responses, unfortunately, this proved impractical given time constraints. Further research of a more qualitative nature might determine, for instance, why students do not make more use of their mp3 devices for listening to language podcasts or discover reasons for the lack of use of laptops in the department generally. Clearly, the role of the teacher and the attitudes of the department are important contributing factors to the integration and implementation of the technologies to which students currently have access, and these issues were not addressed in this particular piece of research. Also, as indicated earlier, this survey
was conducted 4 years ago, so reflects the situation at that time. While we might assume that current students’ access status levels are now higher, and that mobile devices and social networking technologies may have a higher profile in language classrooms in 2010, the trends evident from this research, particularly in relation to gender and ethnic differentiation in access, may continue to be relevant as new technologies appear for mainstream use in our society, and are then adopted and transposed or adapted for educational use.

**Conclusion**

In considering technology, access is just a beginning. More important is the way that we, as teachers, choose to use existing and new tools with our students. As Gorard and Selwyn (2005) point out, “having access to ICT is not … the same as using it” (p. 25). The percentage of younger students in our classroom who may be digital natives, having grown up with technology as a ‘language’, will no doubt continue to increase but what is crucial is how we are using the tools available and how we need to obtain student uptake to support their use for educational purposes. Much current literature in the CALL field, therefore, is focused on teachers’ use of technology and how it contributes to improving and enhancing classroom practice. This is not only enabling flexible elearning options and an increase in mlearning as other useful methodologies, but also promoting students’ abilities to deal with the ‘second’ divide, as outlined by Warschauer and Matuchniak (2010). This could include for example students facility with manipulating the technology in terms of evaluation, analysis, interpretation, attacking complex problems, testing solutions, managing multi-faceted projects, collaborating in knowledge creation and effective communication to a range of audiences.

However, it is still worth considering the access to technology that currently exists, not just in our institutions but for our students. New technologies will continue to be developed and to offer possibilities for our students’ learning. In the face of technological change, Levy (2006) reminds us that it is up to us as teachers to make appropriate decisions about technology use and to “locate the optimal balance of approaches, resources and tools to meet the needs of particular learners in a particular learning context” (p. 1).

The purpose of this research was initially to inform decisions made within our own school with regards to technology use and provision. Our particular context was a tertiary environment, but issues of access to and classroom use of technology are important across the primary and secondary sectors as well. Schools need to consider how best to make teaching and learning widely and freely available and easily accessible to a range of students with competing demands on their lives whether it be time, finances, social networks, emotional issues or family responsibilities. It would also to be very interesting to undertake a further survey to see the levels of computer literacy once the current under-35 group in this research project transitions to the over-35 group. As an illustrative study, it is hoped that some of the findings discussed above may well be useful in providing insights for other institutions as regards ESOL students’ access and attitudes to technology use, particularly in relation to language learning.
References


