

iPad Integration: Mobile Learning Issues in University Classes

Rab Paterson
English for Liberal Arts Program
International Christian University

This is a report on an early experiment with iPad 2's in a university setting. In this action research project, 19 students in an Academic Reading and Writing class for those with high-level English were given iPad 2's for five weeks for their own personal use. As ICU has campus-wide Wi-Fi, this effectively made every classroom a type of computer room, whereas actual computer rooms were in such short supply and high demand that other classes were limited to one session per week in a computer room, even when the classes met five times a week. These iPad equipped students were also doing multimedia project work in addition to their normal class tasks. This study aimed to find out their reactions to the iPad experience in their academic and multimedia work in the hope that the results would influence the adoption of multimedia tablets like iPads at ICU in the future.

ICU started as a language institute in 1952 and converted to a university in 1953. It had the aim of bilingually teaching liberal arts to the Japanese and the international population based in Japan after the Second World War as a way of promoting peace (ICU Self Study Committee, 2009, p. 5). Part of this academic undertaking was the creation of a program in the university to teach English language skills, critical thinking, research skills and other important academic skills that all students need at the university level. This teaching was implemented in the freshman and sophomore years as students did not concentrate on their actual majors until after these academic and English language foundations were laid. The preparatory program was revised in 1987 and called the Freshman English Program (FEP), and later further evolved into the English Language Program (ELP). The aims and descriptions for the ELP were to ensure the following:

It plays a critical role in helping students in the transition from high school to university. It serves not just as a program to help students improve their knowledge of English, but also as an introduction to a wide variety of academic skills and concepts that are core elements in a liberal arts education. Some of these skills and concepts include critical thinking, reading for both content and analysis, use of the library, and academic writing that combines research, analysis, response and the formulation of academic arguments (ICU Self Study Committee, 2009, p. 56).

This seems to have been a sound conceptual plan using content-based language teaching, an approach which originated from Krashen's theories of language learning, specifically his ideas on 'acquisition' which became popular in the early 1980's (Krashen, 1982).

iPad Integration

The regard in which ICU's program was held could be judged by the fact that a number of other prominent Japanese universities, such as Waseda and Sophia, followed suit, and their English language liberal arts faculties still follow this content-based model to some extent today. However many other universities have 'caught up' with and, in many cases overtaken, ICU in terms of methodology, pedagogy, and educational technology since the ELP's inception, and this in turn prompted a reform process in the ELP in 2005 to try and keep ICU at the forefront of liberal arts and language teaching in Japan. This reform resulted in the ELP further evolving into the English for Liberal Arts (ELA) program in 2012, but as the reform focused more on language issues rather than digital literacy, ICU still lags behind many educational institutions in Japan in terms of integrating educational technology and mobile learning into the curriculum. For example, Kanda University of International Studies, Rikkyo, Chuo, Hosei, Nihon, Senshu and Toyo Universities have all adopted Google Apps institutionally, and The American School in Japan, and Nishimachi International School, along with many other international schools in Japan, have also proceeded down this educational technology route. Meanwhile the ELA only uses Google Apps unofficially, and the rest of the ICU community are not using it at all in any official and / or departmental-wide way. Meanwhile, many other universities and schools in Japan including those listed above, are also on some kind of a 1:1 program with Apple MacBookPro laptops or iPads, effectively making every classroom a multimedia room if the classrooms are equipped with a robust Wi-Fi network.

However ICU, including its High School, does not have any of these Apple or Google systems in place institutionally even now, and certainly did not have them in place in 2011 in the period before the change from the ELP to the ELA, although it did install a university only Wi-Fi network in January 2011. It also does not stipulate any requirements for students to have a laptop or tablet device before enrolling at ICU. In addition, as of September 2013 the Wi-Fi equipped classrooms at ICU do not allow for iPad or laptop streaming to screens via Apple TV devices or Apple Airplay software as the classroom projectors are old and only accept VGA or RCA inputs, not the newer digital high definition HDMI inputs used by Apple TV's and other modern devices. Indeed, as of summer 2013, the ICU dormitories still do not allow student residents to use their own Wi-Fi routers either, and only provide Internet access via LAN cables (ICU, 2013, p. 7). This is hardly a model of innovation in integrating mobile educational technology at ICU, especially when other educational institutions in Japan are doing all of this and more. So in response to this situation, I attempted to pilot the usage of some mobile iOS devices (iPad 2's in this case) in autumn 2011 to see if this could help with the modernization of ICU in this educational technology / mobile learning field.

In the modern world, the way people are accessing information has changed and is continuing to change as technology affects the delivery systems of information media like newspapers, TV and radio. Sales figures of newspapers are falling (Plambeck, 2010), direct TV and radio news viewing figures are falling (OECD - Directorate for Science, Technology and Industry, Committee for Information, Computer and Communications Policy, 2010), and trust in traditional news media is falling (Ostrow, 2009; Robinson, 2010). More and more people are now using the Internet to access news websites when they want to obtain information, compared with newspapers, TV and radio who release their traditional content at set times only. Furthermore increasing numbers of people are using Web 2.0 technology to access information forwarded from their peers rather than from traditional media outlets ("Spiceworks Community," 2012). Indeed one survey showed young people using John Stewart's The Daily Show for news rather than TV news broadcasts (Pew research Center, 2007; "Young Get News From Comedy Central," 2009). So information literacy and

technological literacy are playing a larger and larger role in people's daily lives. As this happens, people are increasingly getting digitally connected as technology improves and spreads (Neilson Online, 2011). Unsurprisingly, this digital sphere of influence and flow of information can also have a major effect on academic life and academic types of access to information, especially from mobile devices. As a result forward thinking universities need to explore the possibilities of this information revolution.

Research Background

As stated above, ICU's digital inventory did not include any iPads in 2011, and indeed still does not as of autumn 2013. So I contacted the Apple sales representatives, Ms Naoko Iigo and Mr Hiromichi Yamaguchi, when they visited ICU in the spring and summer of 2011 and they were most helpful in dealing with the logistics. Finally after a meeting with the then Executive Director of International Affairs, Professor Shaun Malarney, I cleared all the bureaucratic hurdles and arranged for a loan from Apple of a class set of iPad 2's for five weeks for a class project for my Academic Reading and Writing class from the ELP's program C (the highest level of English class in the ELP at that time). I received the iPads from Apple and had them set up with Wi-Fi passwords from the Integrated Language Center (ILC) at ICU in early October 2011. The students were then shown how to use the iPads over two class sessions in a computer room, and took possession of them for just over a month so they could use them whenever they liked for their class projects. This was following the "ubiquitous access to technology" ideal as mentioned in the Apple Classrooms of Tomorrow (ACOT) report (*Apple Classrooms of Tomorrow - Today: Learning in the 21st Century*, 2008). I had prior experience in using iPads as I had my own and to get to ICU involves a long commute. So on the train I had been using my iPad to catch up with general teaching tasks. Consequently I encouraged my students to do likewise to efficiently and productively use their iPads during their transit time on their project classwork tasks.

Prensky, in his *Digital Immigrants / Digital Natives* divide theory (2001) posits that in principle younger people are intuitively better at using technology than older people. However, this theory's weak point is in its generalisations. Some older but very tech savvy teachers would be classed as digital immigrants, not natives, as a result of their age, despite their abilities. Furthermore, although the students at ICU are certainly younger than their teachers, they are not always more proficient at using educational technology, nor are they always more digitally literate. They certainly do seem better at using mobile phone type technologies and tools than the vast majority of older people (as mentioned above), but from my experience this does not translate into being capable at using the 'normal' computer type academic applications, and other digital and information literacy skills, tools, and techniques. As iPads are somewhere in between computers and mobile phones I wanted to see how the students would fair in this regard, as the iPad 2's were only released in Japan at the end of April 2011, (Staff Writer, 2011) just six months before this project.

Japan has many educational problems at present besides digital literacy and educational technology. Eades et al (Eades, Goodman, & Hada, 2005) examine many of the challenges facing Japanese universities in the 21st century and for the most part shows how they are not rising to these challenges; in fact a previous paper of mine (Paterson, 2008) looks at how students can be treated as mere commodities by many universities in the current economic and demographic climate in Japan. So with this kind of problematic background in the Japanese higher education sector I attempted to contribute something positive (instead of just

pointing out the many problems) and try to improve the educational technology set up at ICU. This is an area in which I determined the ELP, and later the ELA, have been very weak in recent years, with very few areas where they would score well on the technology diffusion of innovations scale (Rogers & Rogers, 2003). Also as an activist professional and teacher (Sachs, 2003) as well as being one of the few ELA teachers interested in educational technology, I felt it my professional duty to experiment and innovate in this way with new approaches as professionals should not tolerate the continual application of out-of-date methodologies and practices, especially when knowledge of current best practices is freely available, and / or when action research opportunities to develop new approaches abound.

Research Aims

Therefore, this research paper examines the experiences of a first year class of students from the Academic Reading and Writing course in the ELP, as they learned how to use digital tools and techniques and iPad 2's to help their academic research work at ICU. The purpose of this study was to obtain student evaluations of the content of their classes in order to help confirm the relevancy of the content and to further improve the delivery and quality of this important type of modern content in the future. While in some respects this was an experimental research project, it was also heavily action research oriented, as the results will hopefully influence how ICU deals with digital literacy over the next few years. The students' actual impressions of the extent they improved their research and writing skills, and their overall impression of the tools and techniques along with any suggestions for further improvement, were also important research aims of this study.

Research Methodology

Overall the approach of this research project was of a confirmatory nature rather than an exploratory one according to Guest's description (Guest, MacQueen, & Namey, 2011, pp. 7–8). I had been advocating general digital literacy classes on a compulsory basis at ICU since my arrival in 2007 as a result of my, and my own students', positive experiences with small-scale elective classes of this nature. So I started to conduct action research following Bassey's model (Halsall, 1998) to further improve my classes as they progress. Furthermore I was also an insider researcher as I taught the class at ICU, and it was my own students who were being surveyed here. Therefore I am not approaching this from a grounded research position at all.

As an insider researcher there are advantages and disadvantages (Floyd & Linet, 2010). The main disadvantage is the effect of power relations. Students may be reluctant to answer freely for fear of not pleasing the researcher (or their teacher) and thereby possibly receiving poor grades if they do not give the 'right' answers. This has further potential to be a major problem in Japan given the added peculiarities of their Confucian educational heritage (Lee, 2011; Stapleton, 1995) whereby Japanese students try to avoid disagreeing with their teachers out of respect for their status and position. However, these students were well used to my expectations of critical thinking and free speech on any issues on their part, and not to just blindly agree with what I (or indeed any authority figures) say. In addition the surveys and interviews were all given after the semester had ended and grades had already been given to further suppress the grading "effect". Another negative power relations factor with this type of

insider research is the fact that students could end up in teachers classes again in future. Within the structure of the ELP courses at that time my students had little or no chance being in my class ever again, unless any of them specifically volunteered for my elective classes. So where possible, I tried to minimize the negatives associated with insider research.

In contrast, there are some strong positives to insider research of this nature. First of all as an insider, I had a very detailed understanding of the background to the classes, department and university. Secondly, I had a positive relationship with the students involved and I felt this encouraged them to be relatively open in their answers. Lastly as an insider researcher and action researcher, I had access to institutional information and was in a position to act on any information received from students in this research project to further refine and improve the classes I teach. Overall I feel these positives outweighed any potential power relation negatives, especially given the measures I took to try and reduce the power relations.

The actual approach taken was to use class surveys, and these had closed and open ended questions as well as sliding scale type answers, and followed the approach of de Vaus where possible (2002). To negate any bias in the supplied range of possible answers, I also supplied a text box for further comments under all such closed questions. The analysis of these data sources was combined with my own experiences with these students' work after they had been taught the relevant tools, and compared with my recollections and experiences with previous years students who did not receive this type of digital literacy content.

Research Process

The class that participated in this research project was an Academic Reading and Writing class. Students from this class learned the basics of how to conduct 'digital' academic research, i.e. how to efficiently search online, find, download, store and share information digitally, both on computers and the iPads. This has long been a weak point at ICU as indicated by freshmen and sophomore students in previous internal ELP and ICU student surveys. Also the graduating seniors, in their internal ICU feedback surveys have also indicated their dissatisfaction with their levels of such 'technical' proficiency as the survey highlights this weakness (ICU, 2005) and the general information literacy weaknesses of students has also been identified by others elsewhere (Burke, 2012; Kolowich, 2011). In addition, the university's own self-study and evaluation report also commented on this (ICU Self Study Committee, 2009). The average scores of student satisfaction at ICU ranged from 69.3 to 95.2% except for 'Enhanced ability to use computers and information technology' which only got 63.4%, the lowest score. Furthermore, when looking at online sources, most students are less critical in general than when looking at print sources. Therefore the medium definitely has an effect on the message (McLuhan, 2005) as other researchers have found that students put more trust in sources that are online compared to traditional paper sources. This is possibly as a result of the students having extensive experience of critiquing print sources compared with online ones (Burke, 2012) and in many cases not knowing much about the credibility of the online sources they are using (Kolowich, 2011)

Overall then, this course aimed to utilize the TPACK approach (Marino, Sameshima, & Beecher, 2009; Mishra, Koehler, & Zhao, 2007). This stands for Technological Pedagogical Content Knowledge, and is a framework for explaining what teachers need to take full advantage of modern information technology/information communication technology (IT / ICT) developments in the classroom. Essentially the teachers need to know the subject being taught (content), the best way to teach this content (pedagogy) and how best to take advantage

of the IT / ICT tools available to maximize the learning taking place (technology). However the technology is not a passive partner. Knowledge of technology informs and changes the pedagogy, as previously impossible teaching approaches have now become possible, especially via the use of Web 2.0 technologies and online tutors like the Khan academy (“Khan Academy,” n.d.). I also followed the ideas of Creanor and Trinder (Sharpe, Beetham, & Freitas, 2010, pp. 43–55) in how the tools are presented, and unknowingly was mirroring the SAMR model that was developed in 2013 (Puentedura, 2013).

In terms of tools, the course fully utilized the Google Apps suite as well as covering reference management via Zotero and sharing of files via Dropbox. By the end of this course students were able to demonstrate their ability to find a range of good academic sources for their papers and presentations, and to store, organize, and share these with others and also reference these sources properly in their academic work at ICU. This course also covered the basics of modern Presentations Theory (in tandem with ARW class work on Presentations) covering such topics as slideshow design theories like PSE and CRAP (Duarte, 2008; Reynolds, 2008, 2009), and students used these in making their own presentation slideshows. Here the iPads were used in groups for video recording the practice presentations students were doing for review before they had to do it for real.

Furthermore, the course also covered the creation of self-narrated video screencasts of students’ presentations via QuickTime X, editing them via iMovie and uploading them via YouTube onto their Google Sites. These Google websites also hosted their essays and had a links page to show the depth of their research. Most of this iMovie work was done on ICU’s iMacs, not on the iPads, as the iMovie app for iPads is not free, and students only had usage of them for just over a month. So they did not want to spend money on apps for a device they only had temporarily. However the iPads were used extensively for information search when needed in regular classrooms, and used for image searching, video and photo capture purposes, and other such tasks both in and out of class. The url’s of these final group project websites were then shared with everyone in the class for group constructive feedback purposes on each groups’ sites, and indeed one student even took part in an ICU Open Campus presentation with me, explaining her iPad experiences to the visitors.

Ethical Considerations

As normal in this type of research, the surveys were anonymous and the data from the surveys kept in confidence in my private Survey Monkey account. The usual ICU disclaimer present on other internal surveys preceded this survey in class, and full, informed consent was given by students, as they were not forced to take part in the survey anyway. Indeed only one out of 19 students did not take part. As mentioned earlier the survey was completed after classes had ended and grades were already given out before the survey there was little or no pressure on students to take part to please the researcher (me). There was a very high response rate from the students, as they all seemed to be happy to have the opportunity to test out the relatively new iPad 2’s, especially when they were not so widely available in Japan at that time. In addition, all the work in this research paper corresponds to BERA (British Educational Research Association, 2011) guidelines.

Research Design

A 13-question survey was designed for the freshmen students specifically for the iPad element of the course and a 19-question survey for the rest of the general digital literacy type components of the course. According to Dillman (Vaus, 2002, pp. 95–96), there are 5 types of question - behaviour, beliefs, knowledge, attitudes and attributes. Questions from both surveys were created to examine the students' behaviour. For example, how they used any of the tools or techniques taught? Attitude and / or belief type questions were also included, for example how useful they thought certain items were and their thoughts on the final projects. Attribute questions regarding the students' personal background characteristics were not utilised, as I already knew the students and their 'attributes' in this area. Knowledge type questions were also excluded, as they had no relevancy to the subject being surveyed, i.e. technology usage.

The direction and extremity of responses were covered by sliding scale questions that offered a range of possible responses. Issues of positive or negative discrimination in the survey were not relevant as the whole class took the survey so in effect, the range of respondents was outwith my control. I also tried to make the questions as clear as possible to avoid ambiguity in interpretation of the question. By focusing each question on only one topic / tool / technique / hopefully this clarity was achieved. A copy of the sample questions is included at the end in the Appendix section and a link to the responses is in the Data Collection section immediately below. Lastly, while some of the questions were forced choice, where these types of questions were used I included a text box for further comments so the respondents could put extra remarks if necessary to avoid the limited range of choices. The surveys were all conducted online as this enabled respondents to take the survey at their leisure, over a period of time and in the privacy of their own homes if desired. The responses were, of course, anonymous and were made available to students afterwards.

Student Profiles

All the first year students in this study were in one of the highest level of ELP classes (measured by English language ability) and some were educated in international schools in Japan and abroad. As with most ELP classes, around 60 - 70% of the students were female, 40 – 30% male. They were all assigned to my class in the autumn semester for their compulsory core ARW class without any teacher input as they were assigned according to their English scores on entry to the program. Also they were almost all 18-19 years old, so under Japanese law they were not yet adults, as adulthood in Japan comes when they reach age 20. All students in the ELP also had an ELP Reader, which they used in many of their freshmen classes including ARW. This is a book of readings they cover throughout their freshmen year and it is divided into thematic sections for each semester. However, students frequently complained about the weight of the Reader, as they had to carry it to classes almost every day. Having iPads in use enables teachers to be able to access set Reader articles online (if uploaded privately) and provide more up-to-date supplementary online readings of their choice, thereby avoiding the need for students to carry the old style Reader every day. This proved to be a very popular change with students from their class discussions, as they were already used to reading on mobile devices, and they liked the trade off between iPad and Reader, as the iPad 2 was lighter and obviously more functional than the Reader.

Data Collection and Analysis

The students were all surveyed and their responses were collected and collated online using Survey Monkey, the online survey creation, collection and management system. This tool provides the average scores for those questions which included sliding scales in the answer, as many of my questions did. In these responses, the codes and themes that developed were closely related to the tools and techniques covered (and the iPads specifically) and their value in the eyes of the students. The actual results were looked at from an interpretive Applied Thematic Analysis type viewpoint as advocated by Guest (Guest et al., 2011, pp. 15–16) and both the surveys mainly cover their satisfaction with the classes and include their evaluations of the usefulness of the tools. All the results were exported from Survey Monkey in PDF form and are online here, <http://bit.ly/iPadLRBpaper>.

As a result of this research, all my classes now follow this project-based format (without the iPads of course as ICU does not have class sets yet), and I also set students up with Personal Learning Environments (PLE's), taught them how to use them properly following constructivist educational principles via project based work. PLE's are more student-centric than the more common Virtual Learning Environments (VLE) / Classroom Management Systems (CMS) like Moodle, Blackboard, and Web CT that many universities use. VLE's / CMS's are totally under the control of the teacher and institution, and students have no ability to customise the online pages and in many cases actually lose access to their own work after the courses have finished and the pages expire. PLE's however, are totally under student control, and, besides being customisable, students have permanent access to the contents, as the webpages are their own on their own Blogger Blogs, Google Sites and Google Groups. Therefore once students are set up with the necessary tools for PLE's they show a great engagement with assignments using these tools, as generally the public components of their PLE's allow for a greater range of upload types and sizes as well as being more useful for students in general.

This claim of usefulness is borne out by results from my surveys. However, in a private conversation, one student told me he was totally against all technology in education and it is my assumption that this student accounted for the one respondent that consistently scored everything in the lowest category possible. Therefore, when looking at the average scores for each question in the Appendix, this must be taken into consideration as in most cases this is an outlier and Survey Monkey does not allow for outliers to be discounted in their average score function. Taking this student's scores aside it seems the students appreciate these kinds of classes and assignments where they are learning digital literacy skills as well as more traditional academic skill sets like academic writing. Regarding the iPads overall the results were more ambiguous as the survey showed some dis-satisfaction with some of the then limitations.

iPad Integration

or video!!!” and *“memo. It was highly academic, and it was nice to not tire my hands with writing everything down.”* For student installed software apps again a variety of answers came up citing Dropbox, Evernote, Gmail, and the TED app from the tech content studied in class. Some students also installed a bible app for bible class and apps like Skype, which were not covered in class. Of course the Facebook app was hugely popular given how many of the students used Facebook.

The average response for frequency of usage was just over once per class (7.06 on a scale of 1 -10). In addition, there was the one student who was against technology in education in general, and this 7.06 figure is the average including his outlier score as mentioned above. So discounting his outlier makes the averages even higher. Almost all students found the iPads easy to use and had no problems using them except for the lack of editing of Google Apps in Safari, and one or two students even installed Atomic Browser – the only browser with that capability at that time. Of course Safari now has this capability as does Chrome and other freely available iOS browsers. So overall usefulness was 6.75 for ELP work and 6.44 for non-ELP work on the same 1 – 10 scale with the same outlier included.

Just over half of the students thought it a good idea for ICU to have class sets of iPads. However, some of these who supported ICU buying class sets said this was only if certain conditions were met. For example, *“it is a good idea only if icu will make a booth (just one room in ILC or the library) where students can buy apple apps card so the students can buy useful apps that can improve their academic skills.”* and *“Yes, but i also think it would be a better idea to let them take it for set periods of time.”* Here the student was suggesting ICU supply iPads that students can take home rather than class sets for in class use only. I think this is an unrealistic request but certainly ICU could purchase some class sets for use in certain time periods as other universities like Kanda University of International Studies have done.

In the non-iPad survey the average score for usefulness of the tools and techniques covered was very high at 8.28 on a 1 – 10 scale for ELP work and 7.5 for non-ELP work. Zotero was mentioned here in the comments despite the survey having a tool specific and Zotero specific question in the survey. In the tool specific question 11 out of 18 responses mentioned it in a positive way, and in the Zotero specific question the average rating for it 8.17 on the 1 – 10 scale. Zotero is a bibliographic reference manager that makes formatting references and citations and bibliographies and works cited lists very easy. It also has the ability to store all kinds of digital files and attach notes to them. So it was no surprise that this was the most popular software taught as most ICU students complain about having to do referencing, as it is largely absent from Japanese style essay writing at the high school level and most students have little experience with this aspect of academic writing. Some comments were, *“2 days ago I was helping my friend with his essay and I was so freaked out to see him trying to type each works cited. I taught him how to use it immediately!!”* and this next comment was from a student in a class where all students were taught the meaning of writing in all capitals online, *“IT IS GREAT TOOL!!!!!! DEFINITELY I CANNOT LIVE WITHOUT IT NOW!!!!!!”*

Also figuring prominently was the Google Apps suite of tools. The tool specific question had 6 out of 18 respondents mention some aspect of Google Apps positively, and on the Google Apps specific question the average score was 7.83 on the 1 – 10 scale. Some of the comments were, *“After knowing Google Docs, I used it even for the classes which is other class of ELP. It is very useful because we can share our ideas very easily.”* However even here Zotero got a mention, *“If Zotero can be used with google docs, it would be perfect...”* and this from a student who was unaware that Zotero did work with Google Docs, albeit in a more

iPad Integration

limited way compared to the Microsoft Word plug in's functionality, although it is possible this is what was being referred to.

Conclusions

Based on the students' comments regarding the iPads, there were certain areas where the iPads did not meet expectations. The majority of these negative comments centred around the then inability of the iPads to fully integrate with the Google Apps my classes were already heavily using. This was mainly due to the limitations of the iOS Safari browser at that time, as it enabled view only usage of the Google Apps, not the editing possible on a computer. However shortly after this experiment other browsers for the iOS platform were released (Atomic Web for example) that did enable editing of these Google Apps. Safari also has this capability now and of course Google Chrome has been released for the iOS platform. So these compatibility shortcomings are no longer relevant.

Another complaint was the limited range of free apps for the iPad 2 that were available at that time. The students were only interested in free apps as they only had the iPads for a short time. It is likely they would have paid for good quality apps if the iPads were actually theirs. Notwithstanding this ownership limitation, the range of free apps for iPads now is much, much more extensive than it was in 2011 as over the last two years the number of apps has skyrocketed to over 475,000 by December 2013 according to Apple ("Apple - iPad Air - App Store," n.d.).

Aside from these two shortcomings, the overall evaluation was positive. The students liked the portability and lightweight of the devices, and the fact they integrated well with the iMacs at ICU. Those that had iPhones also appreciated the similarities in operation and the fact that App purchases for one device worked on the other. The most positive conclusion to be drawn was the students' impressions regarded being always connected to information flows, via the Wi-Fi on campus and via Wi-Fi dongles for those who had them. Being able to instantly fact check any lecturer's comments, find out information whenever needed, and / or communicate with others at any time was the most commonly mentioned benefit. This seems to gel nicely with the "ubiquitous access to technology" conclusion from the ACOT 2 report mentioned at the beginning of this paper. Therefore investing in iPads is something I would recommend for any university or school hoping to modernize and take advantage of the mobile learning possibilities of the 21st century.

From the generic survey on the digital literacy aspects of the course on the PLE components such as Google Apps, Zotero and the other education technology tools and techniques covered, the feedback was quite positive indeed. The vast majority of the students really appreciated learning this modern content and based on the overwhelmingly positive comments, teaching this content is something that I not only recommend but also feel it is something that universities would be remiss in their responsibilities as educational establishments if they neglect this vitally important component of modern learning. In fact, since this study the spread of tablets into education around the world has intensified ("Tablet Initiatives Around the World," 2013) as this survey's results have been replicated by many others. Indeed this growth in iPad usage is what prompted the writing this paper as a historical record of one of the first iPad pilot projects, and many of the reflections in it benefit from hindsight as normal in reflective papers. Finally, I hope this paper will help inform others in what is now possible, educational speaking, with tablet devices in education and to seek out further resources on the very important issue of mobile learning as the knowledge base in this

iPad Integration

area is expanded continually, and teachers need to keep up to date with the latest developments to avoid becoming outmoded.

Limitations

The most three obvious limitations were a) the small sample size of 19 students, b) the fact it was only one class, and c) the short duration of the study: being five weeks. As the ELP projects usually took five weeks the latter limitation was understandable. The other two were as a result of the small number of available iPads I could obtain. However despite these limitations I felt the research study was worthwhile as I did gather some useful conclusions.

The Author

Rab Paterson is President and Conference Chair of the [Asia Association for Global Studies](#), a member of the editorial board of the Asia Journal for Global Studies, and a Fellow of the [British Royal Asiatic Society](#) and holds memberships in many educational technology focused organisations. He has a BA (Hons.) in Pacific Asian History, and an MA (Hons.) in Pacific Asian Studies, from London University's [School of Oriental and African Studies](#), and conducted doctoral-level research at Waseda University's [Graduate School for Asia Pacific Studies](#) in International Relations. Currently he is a doctoral candidate at London University's [Institute of Education](#) on their International Education Doctorate (EdD.) program, where he is conducting research on digital / information / multimedia / visual literacy, and has presented on this at many international conferences worldwide as well as [TEDxTokyoTeachers](#) in February 2013. In March 2013 he was one of the winners of the [Apple Distinguished Educator](#) award for Japan and in December 2013 he was accepted for the [Google Teacher Academy](#) and became a Google Certified Teacher!

Acknowledgements

Special thanks are due to Ms Naoko Iigo and Mr Hiromichi Yamaguchi of Apple Japan for their help in obtaining the 22 iPads needed for this research project. Without their help this project would never have gotten off the ground. Thanks also are due to Ms Tomoko Kobayashi for her support for this project, and for setting up the iPads with ICU's Wi-Fi passwords.

References

- Apple - iPad Air - App Store. (n.d.). Retrieved December 15, 2013, from <http://www.apple.com/ipad-air/app-store/>
- Apple Classrooms of Tomorrow - Today: Learning in the 21st Century*. (2008). Retrieved from http://ali.apple.com/acot2/global/files/ACOT2_Background.pdf
- British Educational Research Association. (2011, September). Ethical Guidelines for Educational Research. BERA. Retrieved from <http://www.bera.ac.uk/guidelines>
- Burke, D. R. (2012, April 1). *Technological Literacy in the Foreign Language Classroom*. Conference presentation presented at the 5th International Symposium on Digital

- Technologies in Foreign language Learning, Kyoto University. Retrieved from <http://digitallanguagelearning.wikispaces.com/>
- Duarte, N. (2008). *slide:ology: The Art and Science of Creating Great Presentations* (1st ed.). O'Reilly Media.
- Eades, J. S., Goodman, R., & Hada, Y. (2005). *The "Big Bang" in Japanese Higher Education: The 2004 Reforms And the Dynamics of Change*. Trans Pacific Pr.
- Floyd, A., & Linet, A. (2010). Researching from Within: Moral and Ethical Issues and Dilemmas. Presented at the "Where is the wisdom we have lost in knowledge?"; Exploring Meaning, Identities and Transformation in Higher Education, Celtic Manor, Newport, Wales, UK: Society for Research into Higher Education.
- Guest, G., MacQueen, K. M., & Namey, E. (2011). *Applied Thematic Analysis*. Sage Publications, Inc.
- Halsall. (1998). *Teacher Research And School Improvement*. Open University Press.
- ICU. (2005). International Christian University - Program Self Study Report (2005). Retrieved January 9, 2012, from <https://w3.icu.ac.jp/dean/selfstudy/selfstudy.htm>
- ICU. (2013). Summer Course in Japanese: Catalog and information. Retrieved from http://subsite.icu.ac.jp/scj/scj/catalog_files/2012_SCJ_catalog.pdf
- ICU Self Study Committee. (2009). *International Christian University: University Self-study and Evaluation Report* (Self Study and Evaluation Report No. AY 2009) (p. 364). International Christian University. Retrieved from http://www.icu.ac.jp/english/info/policies/pdf/Self-study_Report.pdf
- Khan Academy. (n.d.). *Khan Academy*. Retrieved September 24, 2013, from <http://www.khanacademy.org>
- Kolowich, S. (2011, August 22). What Students Don't Know. *Inside Higher Ed*. Retrieved May 21, 2012, from http://www.insidehighered.com/news/2011/08/22/erial_study_of_student_research_habits_at_illinois_university_libraries_reveals_alarmingly_poor_information_literacy_and_skills
- Krashen, S. D. (1982). *Principles and Practice in Second Language Acquisition*. Alemany Pr.
- Lee, P. (2011). Overview of Background Factors Which May Influence Japanese Learner Behaviour in the Communicative English Classroom. *Keiwa College Journal*, 20.
- Marino, M. T., Sameshima, P., & Beecher, C. C. (2009). Enhancing TPACK with Assistive Technology. *Contemporary Issues in Technology and teacher Education*. Retrieved May 13, 2010, from <http://www.citejournal.org/vol9/iss2/general/article1.cfm>
- McLuhan, M. (2005). *The Medium is the Message*. GP.
- Mishra, P., Koehler, M. J., & Zhao, Y. (2007). *Faculty development by design: integrating technology in higher education*. IAP.
- Neilson Online. (2011). *Internet Usage Statistics: The Internet Big Picture*. Internet World Stats. Retrieved from <http://www.internetworldstats.com/stats.htm>
- OECD - Directorate for Science, Technology and Industry, Committee for Information, Computer and Communications Policy. (2010). *Working Party on the Information Economy: The Evolution of News and the Internet* (No. DSTI/ICCP/IE(2009)14/FINAL). Retrieved from <http://www.oecd.org/dataoecd/30/24/45559596.pdf>
- Ostrow, A. (2009, January 29). Stats: Old Media's Decline, New Media's Ascent. *Mashable*. Retrieved July 24, 2012, from <http://mashable.com/2009/01/29/stats-old-media-decline/>

- Paterson, R. (2008). Education in Japan: The School as a Business, Teachers and Students as Commodities. *Journal of Management and Social Sciences*, 4(2), 89–103.
- Pew research Center. (2007, March 12). Journalism.org; Pew Research Center's Project for Excellence in Journalism. *Journalism.org; Pew Research Center's Project for Excellence in Journalism*. Retrieved July 25, 2012, from <http://www.journalism.org/node/7046>
- Plambeck, J. (2010, April 26). Newspaper Circulation Falls Nearly 9%. *The New York Times*. Retrieved from <http://www.nytimes.com/2010/04/27/business/media/27audit.html>
- Prensky, M. (2001). Digital natives, digital immigrants Part 1. *On the Horizon*, 9(5), 1–6.
- Puentedura, R. R. (2013). Ruben R. Puentedura's Weblog. *Ongoing thoughts on education and technology*. Retrieved August 30, 2013, from <http://www.hippasus.com/rrpweblog/>
- Reynolds, G. (2008). *Presentation Zen: Simple Ideas on Presentation Design and Delivery* (1st ed.). New Riders Press.
- Reynolds, G. (2009). *Presentation Zen: The Video*. New Riders Press.
- Robinson, J. (2010, June 17). UK and US see heaviest newspaper circulation declines. *the Guardian*. Retrieved July 24, 2012, from <http://www.guardian.co.uk/media/2010/jun/17/newspaper-circulation-oecd-report>
- Rogers, E. M., & Rogers, E. (2003). *Diffusion of Innovations, 5th Edition* (5th ed.). Free Press.
- Sachs, J. (2003). *The Activist Teaching Profession*. Open University Press.
- Sharpe, R., Beetham, H., & Freitas, S. de. (2010). *Rethinking Learning for a Digital Age: How Learners are Shaping their Own Experiences* (First Edition.). Routledge.
- Spiceworks Community. (2012, July 13). Amtel page. Retrieved from <http://community.spiceworks.com/topic/243458-the-rise-and-fall-of-digg-a-case-study-for-the-rise-of-web-3-0>
- Staff Writer. (2011, March 25). Apple to sell iPad 2 in 25 more countries at 5 p.m. local time on Friday. *Apple Insider*. Retrieved September 24, 2013, from http://appleinsider.com/articles/11/03/22/apple_to_sell_ipad_2_in_25_more_countries_at_5_p_m_local_time_on_friday
- Stapleton, P. (1995). The Role of Confucianism in Japanese Education. *The Language Teacher*, 19(4), 13–16.
- Tablet Initiatives Around the World. (2013). *Tablets For Schools*. Retrieved January 4, 2014, from <http://www.tabletsforschools.org.uk/worldwide-research/>
- Vaus, D. de. (2002). *Surveys In Social Research* (5th ed.). Routledge.
- Young Get News From Comedy Central. (2009, February 11). *CBS News*. Retrieved July 24, 2012, from http://www.cbsnews.com/8301-207_162-603270.html

Appendices

[Appendix A - iPad Survey Questions, Response Rates, Responses, & Summaries](#)