

Are we ready for BYOD?

An analysis of the implementation and communication of BYOD programs in Victorian schools

Kitty Catharina Janssen

Monash University, Australia

Dr Sivanes Phillipson

Monash University, Australia

Many Victorian secondary schools appear to be implementing Bring Your Own Device (BYOD) programs as the Australian Federal government's Digital Education Revolution funding has come to an end for 1-to-1 Learning programs. One of the key elements identified as important for the success of these programs is the clear communication of policies and protocols with the school community; something that may not be occurring on school websites. This paper explores the extent of 1-to-1 Learning and BYOD model implementation in Victorian secondary schools and identifies the type of information provided to parents and the school community via school websites. The results show that 78.7% (n=88) of the sampled schools have 1-to-1 Learning programs; 64.4% (n=72) BYOD. Information about 1-to-1 Learning programs on school websites was found to be limited or lacking for the majority of schools. The implications of these results are discussed in light of concerns for the successful, safe and equitable implementation of BYOD in educational settings.

Introduction

As we continue to make our way into the new era of 21st century learning, the majority of Victorian secondary schools have achieved a 1-to-1 computer to student ratio for Years 9 to 12. This ratio was largely achieved through funding made available by the Australian Federal government from 2008 to 2013 that provided schools with the funds to buy laptops for their students (DEECD, 2009). Now that funding has finished, Victorian schools are faced with the decision as to what to do to sustain these programs as there is an expectation amongst students, teachers and parents that 1-to-1 ratios will be maintained (Sweeney, 2012). It appears that many Victorian schools are responding by implementing BYOD programs whereby students supply their own mobile devices for learning at school.

1-to-1 Learning models

1-to-1 Learning is the term used to describe learning programs where students have a computing device that they carry between home and school. BYOD (Bring Your Own

Device) is a type of 1-to-1 learning model whereby students supply their own mobile technology device(s) to school for the purpose of learning. BYOD is also known by other names including BYOT (Bring Your Own Technology) (Lee & Levins, 2012) and BYOC (Bring Your Own Computer) (Ackerman & Krupp, 2012). There are also a number of different models and definitions of BYOD (Stavert, 2013), which may lead to confusion. For the purposes of this study, 1-to-1 Learning models have been categorised as follows:

1. Bring Your Device (BYD) School Device.
2. Bring Your Own Device (BYOD) Specified Device.
3. Bring Your Own Device (BYOD) Any Device.

The BYD School Device is the model where the school supplies the device at no cost to students for use at home and at school. Although the school owns the device, students have the same device all year, treat it as their own, customise it and are ultimately responsible for it. Schools maintain the device and its software and usually provide insurance, though students may be responsible for damage not covered by insurance. The advantage of this model is that there is no cost to the parents and as all students have the same capabilities teachers find it easier to design their curriculum around the device. However, this model is costly to the school and is usually only possible through government-funded schemes.

The BYOD Specified Device model is where students buy their device(s) for use at school; however, the school specifies the device(s). As with BYD School Device, this model ensures all students have the same capabilities but imposes an extra cost burden on families (Florell, 2012) as they have to purchase a specific device. Schools may help alleviate the burden by organising a package, which includes the device, software, insurance, and maintenance plan, which may be paid through a payment plan. In this study, it was not always possible to determine the percentage contribution made by parents when they purchased the device(s) through school, hence any program whereby a contribution was made by the parents towards a specified device was included in this model.

The BYOD Any Device model is where the student brings their own device from home with minimal specifications, for example Internet connectivity, minimal screen size or age. The advantage of this model for the school is that the cost, risk and responsibility of purchasing, maintaining, upgrading devices are left to parents and students; the school maintains the network. In addition, parents may not have to purchase a new device and students are already familiar with the device. The disadvantage for the school is that it has little control over students' capabilities as their devices and software may all be different; making it more difficult to design the curriculum.

1-to-1 Learning program website communication

Implementing a 1-to-1 Learning model, including BYOD, requires particular considerations to ensure a successful, safe and equitable outcome. To support schools with their implementation, the Victorian government has released an online DigiPub called Planning for 1-to-1 Learning; Practical Advice and Resources (DEECD, 2014), hereafter referred to as the Planning Document. This document outlines the key steps

and considerations for preparing, planning and implementing 1-to-1 Learning, including a section for BYOD programs. The document also provides links for research into other 1-to-1 Learning program documentation such as the NSW BYOD documentation (New South Wales Department of Education and Communities, 2011, 2013; Stavert, 2013), the BYOD guide for schools (Alberta Education, 2012) and discussion papers from private industry (Dixon & Tierney, 2012; Sweeney, 2012).

Review of the Planning document and linked documentation suggests there is a consensus that much of the success of a 1-to-1 Learning program depends on the school engaging with their community using an effective communication strategy. The Digital Education Advisory Group (2013) advises that clear communication is important for success as programs rely heavily on community cooperation and collaboration with learning taking place outside the school walls. Similarly, Dixon and Tierney (2012) state that “without this [stakeholder engagement] there is a likelihood of friction and scepticism” (p.13) leading to a less successful program. It is suggested that a successful communication strategy includes a variety of methods; including the use of the school website.

When considering communication through the school website, it is not clear what those communications may look like. The Planning document states that the school website should provide the rationale of the program in order to promote the benefits of the program. Upon further reading of the document, however, it is clear that communication of support documentation, such as the Acceptable Use Agreement, and equity provisions could also be included on the school website. Inclusion of this information will help ensure its successful, safe and equitable implementation.

The Acceptable Use Agreement is a document that aims to support students to behave safely and responsibly online both inside and outside of school. The Acceptable Use Agreement Guidelines (DEECD, 2013) indicate that the Acceptable Use Agreement should consist of three sections; the school profile statement, the student declaration and the conditions of use for devices. The school profile statement asks schools to “focus on programs and procedures that are in place to support safe and responsible use of digital technologies” including the need to support parents at home. This is of importance as there are potential health risks associated with introducing BYOD into schools such as an increase in sedentary behaviour, poorer spinal and postural health, an increase in sleep deprivation and an increased likelihood of cyberbullying (Merga, 2015). The student declaration section asks students to agree to “be a safe, responsible and ethical user at all times” by asking them to agree to a set of statements. This section aims to protect students from inappropriate online behaviours. The final section of the agreement outlines practical considerations regarding the use of school-owned devices. This section helps clarify who is responsible for day-to-day practicalities such as transport, maintenance and insurance. As the Acceptable Use Agreement contains a important online safety information and is already part of ICT programs, it stands to reason that a copy on the school’s website would be ideal for easy reference by parents, guardians and other interested community members.

Schools with compulsory BYOD programs could also provide equity information on their websites. Having provisions for students who can’t afford a device or temporarily don’t have a device is important to ensure that students are not disadvantaged due to their social or economic status; a requirement of the Education and Training Reform Act 2006 (DEECD, 2014). The simplest way for schools to

ensure equity of access is to allow students to borrow a device or offer a payment plan to make the device more affordable (Stavert, 2013). It stands to reason that the communication of equity provisions is crucial to ensure children are not disadvantaged for economic reasons and the school website is arguably the ideal place to ensure access to this information for all stakeholders, at all times.

A thorough review of the literature and publicly available documentation revealed no information with regards to the type of 1-to-1 Learning programs, such as BYOD, nor is there information on how many schools are using their websites to communicate information about their programs. Therefore, this study's aims are two-fold:

1. to ascertain how many schools and what types of schools have implemented a 1-to-1 Learning model, specifically BYOD; and
2. determine the information that schools are communicating to stakeholders via their websites in order to ensure a successful, safe and equitable implementation of their programs.

Methodology

The sample of Victorian secondary schools (n=115) was obtained using random cluster sampling (Tabachnick & Fidell, 2013) where every fifth school was selected from a list of Victorian secondary and primary/secondary combined schools (N =579) sorted by school type (government, independent and catholic). The list was generated from the Department of Education and Early Childhood Development website (<http://data.gov.au/dataset/school-locations-victoria>).

The profile and website information for each school in the sample was collected for each school from the My School Website (<http://www.myschool.edu.au>). Information such as school sector (government/non-government), location (metropolitan and provincial), school's Index of Community Socio-Educational Advantage (ICSEA) value, distribution of students and total enrolments were included. In addition, each school's median Victorian Certificate Education (VCE) score was recorded from Better Education website (<http://www.bettereducation.com.au>).

1-to-1 Learning program information was obtained by analysing information on the school website, after searching the website for the following:

1. A page dedicated to ICT, e-learning or similar.
2. Downloadable documents which could relate to or contain information about their ICT program, mobile phone policy and student engagement policy e.g. student handbook.
3. Pages on website that may relate to any aspect of ICT, e.g. parent FAQ sections and newsletters.

Where there was insufficient information to determine the ICT program from the school website, the school was contacted by phone or e-mail. Three schools on the list did not have any information available on their websites about their secondary programs and were discarded from the study for all subsequent analysis (n=112).

The information found on the website was checked against an observation schedule (see Appendix). Items on the observation schedule were based on the recommendations of the Planning document (DEECD, 2014) and its supporting documents. Thirty-five items were included in total and subsequently grouped into five categories:

- ICT program description;
- School responsibilities;
- Students acceptable use expectations;
- Practical considerations; and
- Equity information.

For each category, items were rated as 'recommended' (coded as 0) or 'extra details' (coded as 1) (see Appendix for details). Recommended items were those described in the Planning document (DEECD, 2014) or the Acceptable Use Agreement Guidelines (DEECD, 2013) linked within it. Extra details items were found in other documentation linked within the Planning document mainly the NSW literature review (Stavert, 2013). The only exception was the item 'compulsory specified' which was added to the ICT program description category as a recommended item despite it not being discussed in the literature. This approach was taken because it is useful to know whether all students are required to be part of the program especially when considering equity of access. Based on these ratings, information for each category was coded as having:

- No information;
- Limited information – some but not all recommended items provided;
- Recommended information – all recommended items provided; and
- Recommended plus extra details – extra details provided in addition to the recommended items.

Data collection was started and completed in June 2014. To ensure validity and consistency of the data, 12 randomly selected schools (10% of the total) were checked and ratified by two other researchers whose answers were found to be comparable (Tabachnick & Fidell, 2013). Using SPSS version 22, descriptive statistics and cross tabulation of ICT programs across sectors and against socio-educational advantage groups were completed. Independent sample t-tests were also generated to determine the relationships between the variables in order to identify how different types of schools are implementing BYOD models.

Results

1-to-1 Learning model implementation

The results indicate that 78.7% (n=88) of schools analysed are implementing a 1-to-1 Learning program; 64.4% (n=72) of schools sampled implement a BYOD program (See Table 1). Analysis of 1-to-1 Learning programs against profile information; location, number of enrolments, and school median VCE score, revealed no significant correlations. There was also no significant correlation found between BYOD model and sector (government / non-government schools). However, there was a significant correlation between socio-educational advantage (ICSEA) and BYOD model for government schools ($r = .257, p < .05$). The data indicated that

BYOD Any Device models were more prevalent in socio-educational advantaged government schools than in socio-educational disadvantaged government schools. This correlation was not found for non-government schools.

Table 1

Percentage (number) of schools with BYOD programs by sector

| ICT program | Government | Non-government | Both sectors combined |
|---------------------------|------------|----------------|-----------------------|
| Not able to be determined | 0% (0) | 5.9% (3) | 2.6% (3) |
| School-based equipment | 14.8% (9) | 23.5%(12) | 18.8% (21) |
| BYD School Device | 21.3% (13) | 5.9% (3) | 14.3% (16) |
| BYOD Specified Device | 47.5% (29) | 47.0% (24) | 47.4% (53) |
| BYOD Any Device | 16.4% (10) | 17.6% (9) | 17.0% (19) |

With regards to mobile phones being allowed in classrooms as part of 1-to-1 Learning programs, only 33.9% (n=38) provided their mobile phone usage policy. Of those schools, none of the schools allowed mobile phone to be used in classrooms except for one BYOD Specified Device program, which indicated that they allowed mobile phones with discretion. No schools with BYOD Any Device programs identified mobile phones as part of their learning program.

1-to-1 Learning program website communication

The information about ICT programs provided by schools in this study on their websites was less than recommended for most of the schools (see Table 2). Upon analysis of the information by sector (government, non-government), there was no discernible difference between the sectors with one exception; eight of the nine schools who provided the recommended information on their websites were government schools who had mostly used the Netbook Project Parents Guide (DEECD, 2009) as the basis of their documentation.

It is important to note that some of the information may have been provided to parents through the school’s intranet; a private part of the school website. In this study, 47.3% (n=53) of schools offered separate logins for parents. It is not known what information, if any, was available within these private areas of the website as it was not in the scope of this study.

Table 2:

Percentage (number) of schools providing program information by 1-to-1 Learning model

| | No information | Limited information | Recommended information |
|-----------------------------|----------------|---------------------|-------------------------|
| School-based equipment only | 47.6% (10) | 52.3% (11) | n/a |
| BYD School Device | 37.5% (6) | 50% (8) | 12.5% (2) |
| BYOD Specified Device | 35.8% (19) | 54.7% (29) | 9.4% (5) |
| BYOD Any Device | 26.3% (5) | 63.1% (12) | 10.5% (2) |
| Total | 36.7% (40) | 55% (60) | 8.3% (9) |

Further analysis of the type of information provided by schools with 1-to-1 Learning programs indicated that 18.2% (n=16) of schools provide the recommended descriptive information, 17% (n=15) of schools explain their responsibilities fully, 32.9% (n=29) of schools provide the student acceptable use expectations, and 15.9% (n=14) explain the practical considerations (see Table 3).

Table 3.

Percentage (number) of 1-to-1 Learning programs providing information by category.

| | No information | Limited information | Recommended information | Recommended plus extra details |
|-------------------------------------|----------------|---------------------|-------------------------|--------------------------------|
| ICT program description | 42% (37) | 39.8% (35) | 10.2% (9) | 8.0% (7) |
| School responsibilities | 55.7% (49) | 27.3% (24) | 6.8% (6) | 10.2% (9) |
| Student acceptable use expectations | 50% (44) | 17.0% (15) | 10.2% (9) | 22.7% (20) |
| Practical considerations | 54.5% (48) | 29.5% (26) | 10.2% (9) | 5.7% (5) |
| All categories combined | 34.1% (30) | 55.7% (49) | 9% (8) | 1.1% (1) |

Equity of access analysis was limited to the 53 schools with compulsory BYOD Specified Device and BYOD Any Device programs. Of these schools, 69.8% (n=37) did not provide any information concerning long-term or short-term provisions for those who didn't have a device. For those students who cannot afford the device, only 3.7% (n=2) of schools indicated that they had long-term loan devices available and 20.7% (n=11) informed parents of payment plans or lease agreements. For those students whose devices were temporarily unavailable, e.g. under repair, 11.3% (n=6) provided information about the availability of loan devices. Only 5.6% (n=3) of schools provided information for both long-term and short-term provisions for unavailable devices.

Discussion

1-to-1 Learning model implementation

This study confirms that 1-to-1 Learning programs may be considered commonplace in the majority of Victorian secondary schools with 78.7% (n=88) of schools in this study implementing a form of 1-to-1 Learning program. BYOD programs were implemented in 64.4 % (n=72) of the schools with a preference for BYOD Specified Device programs (47.4%, n=53). Interestingly, there was no discernible difference between government and non-government schools in BYOD implementation despite the differences in socio-educational advantage values of the two sectors; this may be largely attributed to the Federal government funding provided to socio-educational disadvantaged schools between 2008 and 2013. With the end of funding, however, the data show that government schools with higher socio-educational advantage values are more likely to implement BYOD programs than those with lower socio-educational advantage values. This could indicate that the perceived ability for

parents to pay for devices may play a factor in the decision to implement BYOD for government schools; leaving those with parents unable to pay at a loss as to how to maintain 1-to-1 Learning.

The BYD School Device programs represented 14.3% (n=16) of the ICT programs implemented by schools. There were significantly more government schools (21.3%, n=13) implementing BYD School Device programs than non-government schools (5.9%, n=3). These are likely to be the socio-educational disadvantaged government schools who received funding until 2013 and are still managing their programs using the technology provided. It is expected BYD School Device programs will drop in number over the next few years as technology becomes outdated and schools are forced to look for an alternative or return to school-based technology.

With regards to mobile phone usage as part of the ICT program, the vast majority of schools in this study who provided information did not allow mobile phones in classrooms and evidently do not consider mobile phones a learning tool. Some might argue that BYOD Any Device programs should allow mobile phones as the free choice of device is a key element of this model (Quillen, 2011). It might therefore be argued that Victorian schools are not truly implementing BYOD Any Device programs.

1-to-1 Learning program website communication

Communication with parents and the wider school community is a key element to the success of the program and school websites may be considered an ideal way to achieve the cooperation and collaboration of parents for schools (Selwyn, Banaji, Hadjithoma-Garstka, & Clark, 2011). The data for information provided about ICT programs in this study showed that 36.7% (n=40) of schools do not provide even the most basic information about their ICT programs. This is a lost opportunity for schools to promote and explain their programs to prospective parents and the wider community (Tubin & Klein, 2007) using all possible communication tactics.

The most common information to be provided by schools with 1-to-1 Learning programs in this study was the descriptive information (58%, n=51). This is to be expected as identifying the program and providing a rationale is not only recommended by the Planning document but is also most relevant to the public. Although descriptive information was provided by many, there is some concern that only 18.2% (n=16) schools provided all the recommended information, including whether their program was compulsory or not.

The compulsory nature of the school's program is of utmost importance when considering equity of access. As is clearly stated in the planning document, schools that require the use of a device for learning must plan for those who do not have a device; whether this is long-term or short-term, in order to ensure no student is disadvantaged. It is important that these arrangements be made public to be effective. The results of this study show that the majority of schools (69.8%, n= 37) do not provide any information about equity arrangements and that those who did (30.2%, n=16) favoured payment plans (20.7% n=11) over the more inclusive loan devices (3.7% (n=2) for long-term unavailability. Short-term loan devices were only offered by 11.3% (n=6) of schools and only three schools offered both a long-term and short-term solution. This data indicate that equity provisions may not be widely publicised, at least on school websites or it may be an indication that they are not available at all.

This is a potential concern with regards to equity of access for compulsory BYOD programs and should be investigated further.

The category with the highest percentage of school websites providing all the recommended information was the student acceptable use expectations (32.9% n=29) that is part of the Acceptable Use Agreement. It was surprising that this percentage was not higher as the Acceptable Use Agreement has been a requirement of most schools for students to sign as part of their ICT program for many years. By not providing these standards for online safety and responsible use on their websites, schools are losing an opportunity to provide easy access to these important online safety expectations for parents and other stakeholders.

The recommended information for school responsibilities, the first section of the Acceptable Use Agreement, was only provided by 17.0% (n=15) schools. This information tells parents of the school's commitment to help ensure the students' safety; to educate the students to be safe and responsible digital technologies, supervise them in their use, respond to online incidents and filter the internet service they provide. Advice for parents to help ensure the safe and responsible use of technologies at home, i.e. a message or link about cyberbullying and a recommendation to monitor use, was only provided by 10.2% (n=9) schools. As cyberbullying and excessive use can have potentially serious health implications (Merga, 2015), this is another lost opportunity to help support students and ensure the safe use of technology when students are learning.

The recommended information about practical considerations, such as who is responsible for insurance and virus checkers, was not provided on the websites of 84.5% (n=74) of schools with 1-to-1 Learning programs. Although it is very likely that this information is given to parents in other ways at the introduction of the program, issues may not arise until years later. It may therefore be considered prudent to provide these details online for ready access in order to prevent any friction that Dixon and Tierney (2012) discuss as leading to a less successful program.

There is a possibility that the Acceptable Use Agreement and other information is available to parents on the school's intranet which can only be accessed through a login; provided on 47.3% (n=53) of the websites. In this case, one would expect a substantial difference between the program descriptive information - important for prospective parents - and the other categories. As the difference between the categories is not great (8%), it is thought that not many schools use their intranet to provide support documentation to parents.

It is evident that the Victorian secondary schools in this study are not taking the opportunity to communicate their 1-to-1 Learning program information with stakeholders via their website, despite the recommendations in the Planning document and their obvious support of this medium for their students. It may be argued that schools do not have access to the required information or that they do not see value in using the school's website as a means of communication; the 10.1% (n=9) of the websites studied who provided the recommended information may indicate that this is not the case. Is it therefore possible that the remaining schools are not using this communication strategy, as there is no policy to do so?

Lee and Broadie (2014) note that as a result of fast technological advances policy development appears to be lagging behind implementation. They have reported that

where schools used to wait for clear research-based policies, now policies and guidelines are being put in place after schools have started implementation. Our data supports Lee and Broadie findings as schools have implemented BYOD programs without policy documentation; only a Planning document provided in January 2014 that was unlikely to be available when they started implementation. The 1-to-1 Learning documentation continues to be updated; between conducting this study in 2014 and finalising the writing of this article, the Acceptable Use Agreement template was updated in 2015 to include more cyberbullying information and practical considerations recommendations (DET, 2015a). The Planning document (DET, 2015b) was also updated in 2015; unfortunately it is no longer publicly available. At the time of this article, the government has yet to publish a policy document in this area as is available in New South Wales. It is our recommendation that they do so and ensure that their guidelines include a comprehensive list of information to be communicated to stakeholders with reference to the school website.

Further to this study, future studies could investigate parents and other stakeholders' understandings of the 1-to-1 Learning programs implemented by schools and whether the current communication strategies are sufficient. It would also be useful to investigate schools' understandings of BYOD. Do schools know and understand the importance of the clear communication of BYOD programs for the successful, safe and equitable running of their programs? Are they aware of the health implications of their programs? Are they confident that their parent information nights and other means of communication are sufficient to reach parents, prospective parents and the wider community? Are they putting information on their intranets? Or have they not considered putting the information on websites because there has been no clear directive to do so? In answering these questions, particular attention should be paid to safety and equity provisions in order to ensure no student is harmed or disadvantaged by BYOD.

Conclusion

This study offers a snapshot of the implementation of 1-to-1 Learning programs, including BYOD, in a representative sample of Victorian secondary schools. The study indicates that the majority of schools analysed offer BYOD programs yet provide no or limited information about those programs on their websites; a communication tool they so obviously support for their students. This is of some concern as clear communication with key stakeholders is one of the key elements for a successful program. Of particular concern is the lack of advice for parents in terms of cybersafety and monitoring of devices as without parental support at home these learning tools can have negative health implications. Of greater concern is the lack of information about equity provisions; such as the availability of loan devices in compulsory BYOD programs as this may be impacting on students' equal opportunities in the classroom. It is concluded that the lack of website communication by schools may be having a significant impact on the success, safety and equity of the BYOD programs. We recommend that future studies investigate this situation further and that the government provides clearer directives in terms of communication via school websites via formal policy documentation and comprehensive guidelines. In the meantime, we may ask ourselves, are we really ready for BYOD?

References

- Ackerman, A., & Krupp, M. (2012). *Five components to consider for BYOT/BYOD*. Paper presented at the IADIS International Conference on Cognition and Exploratory Learning in Digital Age.
<http://search.proquest.com/docview/1373092734?accountid=12528>
- Alberta Education. (2012). *Bring your own device: a guide for schools*. Retrieved from <http://education.alberta.ca/admin/technology/research.aspx>
- Department of Education and Early Childhood Development (DEECD). (2009). *The netbook project 'in their hands': A parents guide to netbook use at school and home*. Retrieved from <https://www.eduweb.vic.gov.au/edulibrary/public/ict/netbooks/netbookparentpackintheirhands.pdf>
- Department of Education and Early Childhood Development (DEECD). (2014). *Planning for 1-to-1 learning*. Retrieved from <https://fuse.education.vic.gov.au/digipubs/Sustaining%20a%201to1%20Program%20in%20a%20School/Home.aspx>
- Department of Education and Early Childhood Development (DEECD). (2013). *Acceptable use agreement guidelines*. Retrieved from <http://www.education.vic.gov.au/about/programs/bullystoppers/Pages/lolconsent.aspx>
- Department of Education and Training (DET). (2015a). *Acceptable use agreement for upper primary and secondary template*. Retrieved from <http://www.education.vic.gov.au/about/programs/bullystoppers/Pages/lolconsent.aspx>
- Department of Education and Training (DET). (2015b). *Planning and sustaining access to technology*. Retrieved from <http://www.digipubs.vic.edu.au/pubs/planning-for-1-to-1/planning-for-1-to-1>
- Digital Education Advisory Group. (2013). *Beyond the classroom: A new digital education for young Australians in the 21st century*. Retrieved from <http://apo.org.au/node/34413>
- Dixon, B., & Tierney, S. (2012). *Bring your own device to school briefing paper*. Retrieved from http://download.microsoft.com/documents/Australia/EDUCATION/2012008/Bring_your_own_device_to_school_briefing_paper_K-12.pdf
- Florell, D. (2012). BYOT: coming to a school near you (just a click away). *Communique*, 41(4), 36.

- Lee, M., & Broadie, R. (2014). A taxonomy of school evolutionary changes. Retrieved from School evolutionary stages website: www.schoolevolutionarystages.net
- Lee, M., & Levins, M. (2012). *Bring your own technology*. Camberwell, Australia: ACER project publishing.
- Merga, M. K. (2015). Bring Your Own Device: Considering potential risks to student health. *Health Education Journal*. Doi: 10.1177/0017896915599563
- New South Wales Department of Education and Communities. (2011). *Student bring your own device (BYOD) guidelines*. Retrieved from https://www.det.nsw.edu.au/policies/technology/computers/mobile-device/Student_BYOD_Guidelines.doc
- New South Wales Department of Education and Communities. (2013). *Student bring your own device (BYOD) policy*. (PD/2013/0458/V01). Retrieved from <https://www.det.nsw.edu.au/policies/technology/computers/mobile-device/PD20130458.shtml>
- Quillen, I. (2011). Districts tackle questions surrounding BYOT policy. *Digital Directions, 5(1)*, 22.
- Selwyn, N., Banaji, S., Hadjithoma-Garstka, C., & Clark, W. (2011). Providing a Platform for Parents? Exploring the Nature of Parental Engagement with School Learning Platforms. *Journal of Computer Assisted Learning (4)*, 314-323. doi: 10.1111/j.1365-2729.2011.00428.x
- Stavert, B. (2013). *Bring your own device (BYOD) in Schools, 2013 Literature Review*. NSW Department of Education and Communities.
- Sweeney, J. (2012). *BYOD in Education: Nine conversations for successful BYOD decision making*. Retrieved from http://1to1sustainmentdeecd.global2.vic.edu.au/files/2013/07/BYOD_DELL-2dtch9k.pdf
- Tabachnick, B., & Fidell, L. (2013). *Using multivariate statistic* (6th ed.). Boston: Pearson.
- Tubin, D., & Klein, S. (2007). Designing a School Website: Contents, Structure, and Responsiveness. *Planning and Changing, 38(3)*, 191-207.

Appendix: School Website ICT program observation schedule

| Category | Item | Description |
|--|--|---|
| | ICT model | The ICT program (School-based equipment only, BYD School Device, BYOD Specified Device, BYOD Any Device). |
| | Compulsory | Is the program compulsory? (compulsory, opt in/out). Where no explicit statement was made but other statements indicated students must bring the device to class, the program was assumed to be compulsory. |
| | Parent login | Can parents login into the school's intranet, Compass or equivalent? |
| ICT program description | ICT program specified | Is the type of ICT program being implemented at the school specified? |
| Recommended items | Compulsory specified | Is the ICT program clearly stated as compulsory or opt in/out? |
| | Rationale provided | Is a reason or goal for the program provided? |
| Extra details | ICT program description | Is a description of the program provided on the website itself? |
| | Detailed rationale provided | Are more than one reasons and/or goals for the program provided? |
| | How will the device(s) be used? | Is a description provided on how they devices will be used? |
| | When will the devices be used? | Is a description provided on when or how often, the devices will be used? |
| | Mobile phone usage specified | Is it specified whether mobile phones are allowed in the classroom? |
| School responsibilities | Educate cyber safety | Does the website explicitly state that the school will educate the students about safe online use? |
| Recommended items | Filters | Does the website explicitly state that the school has installed filters on their network? |
| | Supervise online | Does the website specifically state that the school will supervise or monitor students' online activity? |
| | Follow up | Does the school stipulate that they follow up on cyberbullying incidents? |
| | No privacy | Are students explicitly told that the school network or computer is not private? |
| Extra details | Support parents about online safety | Does the website provide information or links to help parents understand about cyberbullying? |
| | Support parents to monitor | Does the website recommend that parents monitor their children's electronic media use, set time limit, discourage use of device(s) in bedrooms or ergonomics? |
| Student acceptable use expectations | Be respectful and courteous | Are students given a description of how they are expected to behave online e.g. respectful, courteous? |
| Recommended items | Protect privacy | Are students told they have to follow cybersafety rules such as protecting the identity of yourself and others? |
| | Report inappropriate | Are students told to report inappropriate behaviour or contact a teacher if they are feeling |

| | | |
|---|--|---|
| | Behaviour | uncomfortable online? |
| | Report inappropriate material | Are students told not to access, link, post or send inappropriate material? |
| | No interference | Are students told they must not interfere with the school's equipment and security mechanisms? |
| | Copyright | Are students reminded they must respect intellectual property and copyright? |
| | No recording | Are students told they must not take or publish photos, audio or video recordings without the express (written) permission of the person(s) involved and the teacher? |
| Extra details | Consequence for non-compliance | Are consequences for non-compliance of the Acceptable Use Agreement detailed? |
| Practical considerations | Insurance / warranty claims | Is it clear who is responsible for the insurance or warranty arrangements on the device? |
| Recommended items | Transport | Is it clear who is responsible for ensuring that the device is safe during transport? E.g. use protective cover. |
| | Backups | Is it clear who is responsible for storing and backing up information on the device? |
| | Virus-checking | Is it clear who is responsible for ensuring that there is a virus-checker on the device? |
| | Charge battery | Is it clear who should charge batteries and where? |
| Extra details | Installing software | Is it clear who is responsible for installing software on the device? |
| | Onsite storage | Does the website give information about keeping the device safe while at school? E.g. in locker. |
| Equity considerations (compulsory programs only) | Device unavailable in long term | Are provisions specified if parent(s) can't afford the device? (e.g. long-term loan devices or parent payment schemes) |
| | Device temporarily unavailable | Are provisions made for students who do not temporarily have their device? (e.g. short-term loan devices or alternative work provided) |