How iPad usage supports and enhances learning in a school library:

An investigation into whether iPad usage in a school library warrants further investment in a set of six iPads

Miss Amy Roberts MSc in Information and Library Management, School Librarian, St Margaret's School, Bushey

This research investigates how iPad usage supports and enhances learning within the school library of an independent girls’ secondary and sixth form school consisting of 320 students aged 11-18 by seeking to answer the research questions detailed below.

1. Is the intended task of each user completed to a satisfactory level through the use of the iPad?

2. Is the intended task of each user enhanced through the use of the iPad?

3. Are there any unintended outcomes which result from the piloting of the iPad in the library?
**Background**

The ubiquitous nature of mobile technology provides a medium in which to support a Mobile-assisted Seamless Learning (MSL) environment (Wong and Looi, 2011) giving learners the opportunity to learn ‘anytime, anywhere’ (Chan et al, 2006, p.20, Brophy, 2008 and Wong and Looi, 2011, p.2364) and ‘whenever they are curious’ (Chan et al, 2006, p.23). One of the mobile mediums of choice that is being considered to support the construction of MSL within schools is the iPad.

The enthusiasm surrounding iPad usage in education can be partly explained by what Griffey refers to as the iPad’s “magic window” effect ‘transform(ing) into whatever information device is needed’ (2012, p.8) at that point. The iPad has also been described as:

> a medium that both encourages collaboration and provides unparalleled access to information, has great potential to foster a learning environment where students can gain confidence in their ability to discuss, understand, and apply new concepts. (Rossing, 2012)

These benefits have led to the iPad being recognised as a powerful educational tool (Bennett, 2011, p.22 and Rossing, 2012). As a result there has been a large amount of research into iPad implementation and usage within schools (Harmon, 2011 and Hooker, 2011a), mainly within the U.S.A., since its release in 2010.

**Rationale**

Evaluation of the literature shows a wealth of information on iPad usage in schools. However, the rationale for this research stemmed from the limited availability of empirical research into or discussion of the following themes:

- Provision of iPads within a school library.
- How iPad usage within a school library supports and enhances learning through investigating types of tasks completed and level of satisfaction gained.
• The role a school library plays in the construction of MSL through the provision of an iPad.

Furthermore, limited literature surrounding the discussion of iPad usage in education and education libraries originates in the UK where the library, which was the focus of the research, is based. The gap in the research on the provision and usage of iPads in school libraries and their potential contribution to and enhancement of learning generally, and specifically in the UK, is what the research sought to address.

The scope of this research investigated iPad usage within a UK school library in order to provide a detailed picture of how iPad usage supports and enhances learning within the walls of a school library. Previous research has shown an increase in iPad implementation within school classrooms and iPad loaning programs within education libraries. Therefore, this research helps to inform school libraries how an iPad is used to contribute to learning within the library; the role the library has in supporting an MSL environment through iPad provision and the Librarian’s role in implementing and managing an iPad as a library resource.

The role of a school library

The library holds a unique position within a school, it is a space, both physically and digitally, where a learner can consume and produce information either individually or collaboratively. It is a space where students are encouraged to develop and build skills to navigate the information world via both formal and informal information literacy (IL) instruction. The research questions have therefore been designed to embrace this uniquely multi-functional aspect of the library and allow heterogeneous testing of a multi-faceted mobile device, such as the iPad, in a centralised environment (Foote, 2010).

Research Methods

The research design took the form of a mixed methods approach. The piloting of one iPad for use by patrons within the library was initially conducted where borrowing statistics and anecdotal evidence were collected throughout. A questionnaire was then distributed to all volunteer participants to gather feedback
about the pilot phase. Lastly, five participants were interviewed, the content of the questions being informed by data gathered and analysed from the questionnaire, to drill-down further into the ways in which the iPad supported and enhanced learning.

Over one fifth of students consented (70 out of 320) to take part in the research, all of whom responded to the questionnaire. Therefore, albeit a small response rate, it was reassuring that those who initially consented to be involved in the research remained enthusiastic about the research throughout. Out of the 70 questionnaire respondents 45 used the iPad at some point during the five month pilot and 25 did not.

Findings

A steady borrowing rate calculated from the borrowing statistics over a five month period provided physical evidence of the iPad being used and the frequency of this use. The borrowing rate reflected a solid usage pattern and established reliable evidence. This evidence provided a basis for the use of further research tools in the form of a questionnaire and interviews. In turn these supplied evidence to ascertain whether tasks were completed to a satisfactory or enhanced level.
The range and type of tasks completed and type of apps used were presented in data produced from the questionnaire and provided quantitative evidence for the amount of tasks completed, 161 tasks over a five month period.
Reliable quantitative evidence was therefore produced to show that a range of tasks were completed.

Further findings were drawn from this evidence to help answer whether tasks were completed to a satisfactory or enhanced level.

**Was the intended task of each user completed to a satisfactory level through the use of the iPad?**

Questionnaire findings showed that each user self-assessed completing their tasks to at least a satisfactory level. This was validated further by qualitative evidence produced from Interviews. Interviewees identified that tasks were completed to a satisfactory level via:

- Furthering their knowledge through iPad usage.
- Reaching certain levels of understanding within their task.

Interviewees also identified that this level of satisfaction was reached by the ease, comfort and flexibility the iPad offered when completing tasks.
Was the intended task of each user enhanced through the use of the iPad?

Questionnaire findings also showed that all users except two assessed completing their tasks to an enhanced level. This was also validated by evidence produced from Interviews. Interviewees assessed tasks were completed to an enhanced level when the iPad allowed them to:

- Fully understand a topic.
- Put knowledge they had learnt into practice.
- Feel completely confident in the task they had completed.

Many interviewees recognised that the physical attributes of the iPad were a key feature in deciding when their tasks were enhanced or made better. Interviewee 4 identified the ability to pass the iPad around the group was an enhancing factor. Rossing (2012) also identified the iPad provided a ‘heightened’ or, in the context of this research, ‘enhanced’ level of collaboration. Interviewee 1 and 2 also identified their tasks were completed to an enhanced level via the ease and flexibility of use the iPad offered. In turn this motivated them to complete their tasks whilst also making it a relaxing experience.
Interviewees 1, 2 and 4 distinguished between whether their tasks were completed to an enhanced or satisfactory level by comparing iPad usage to PC usage. They identified completing tasks to a perceived level of enhancement compared to using a PC in the following ways:

- **It was so much easier compared to computers**

  *with a computer you’re in one place whereas with an iPad you can move around*

- **It is so much easier to use than a PC as you can pass it around and you don’t crowd around a PC screen.**

The comparison of the iPad to a PC verified themes discussed by Rossing (2012) who stated PCs and laptops act as a ‘physical barrier’. Users’ demonstrating their preference for using the iPad validated the inclusion of an iPad in the library and suggested further investment was warranted in a set of iPads. The findings have implications for the role of static IT within schools. These findings show detailed evidence of how iPad usage, via investigating tasks completed, supported and enhanced learning, a specific research aim of this study.

The questionnaire showed the main task completed identified by users was ‘research’ via pre-defined categories. The researcher identifies research as a main task that would be expected to be completed within the library. The literature discussed thus far had not researched or identified any specific tasks completed via iPad usage in a library therefore this was a unique finding to the research into the types of tasks completed on an iPad in a school library. All pre-defined categories were selected, to some extent, by users which provided evidence of how the iPad was used as transformative and interchangeable educational tool for the consumption and production of material which heterogeneously supported and enhanced learning in the library.
Overall, findings showed users self-assessed their tasks as being completed to a completely satisfactory and largely enhanced level. This, coupled with the finding that the main task completed was research, provides evidence for the library being a suitable environment for the construction of Wong and Looi’s model of MSL (2011) which supports and enhances learning through iPad provision.

**Were there any unintended outcomes which result from the piloting of the iPad in the library?**

Findings produced from the questionnaire partly answer the above question. Findings showed that one third of users identified they completed a variety of unexpected tasks in the school library. This finding supports a key aspect of MSL discussed in the literature review: ‘enabling learners to learn whenever they are curious’ (Chan et al, 2006, p.23). Users borrowed the iPad and became ‘curious’, explored the iPad further and then completed an unintended task.

Questionnaire and Interview findings provided evidence in favour of the appropriate assessment and provision of training end-users. The findings from users demonstrated training on iPad operation was deemed unnecessary. However, users suggested training on specific tasks; 1-1 training; app usage suggestions and access to further advice in person.

Findings showed there was a split between users who were confident in using the iPad for intended and unexpected tasks and the uncertainty of non-users who would like to use the iPad in the future but stated their main reason for non-use was: *I didn’t know what to use if for.* An unexpected outcome was that although non-users stated: *I didn’t know what to use it for* many were still able to predict what their future use could be.

**Information Literacy**

These findings raised discussion surrounding the concepts of information literacy and the assumption of students as ‘digital natives’ (Prensky, 2001) where students
are seen as ‘native speakers of …. computers’ (p.1). The findings show a confusion or lack of confidence by non-users in how they could utilise the iPad for their predicted tasks. Therefore, the acceptance of students as ‘digital natives’ and over-estimating their ability to use the iPad has implications for the correct assessment and provision of training for end-users of the iPad.

Conclusion

The findings show that the iPad was a popular and well-used resource within the library; a tool which supports and mostly enhances the tasks of users; and that the library has a role in the construction of a Mobile-assisted Seamless Learning (Wong and Looi, 2011) environment through the provision of an iPad. However, the research revealed a need for the appropriate assessment and provision of training for end-users in order for the iPad to be used to its full educational potential. Further research is recommended on how the iPad enhances learning through collaboration and also in comparison to other hardware.

This research sought to investigate the justification for further investment in a set of six iPads. This study produces a wealth of evidence showing the iPad as a well-used resource which supports and enhances learning within the library in a variety of ways, therefore warranting the inclusion of more iPads within this space. The researcher recommended further investment in a set of six iPads to SMT and the ICT Committee and as a result the library now has a set of ten iPads and the school has plans for further investment in a school set of 30 iPads for students to be able to use in lessons.
References


**Bibliography**


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**Contact Details:** amy_roberts@smbushey.com
Biography

Amy Roberts works as the School Librarian for St Margaret's School, Bushey - a small independent girl’s school in Hertfordshire. She loves playing with new technology and is strong supporter of mobile technology within the library and schools. She recently finished her MSc in Information and Library Management MSc at UWE, her dissertation exploring the implementation of iPads in school libraries.