



Mobile Learning at Guildford High School

Summary of Findings

- The teacher in the case study found that the iPads added value to her teaching where she used them to enhance her existing pedagogical practice. She had changed her teaching to make her classroom practice more effective.
- iPads at Guildford High School were initially viewed with scepticism by the intended recipients, both staff and pupils.
- Over the course of the two years the school has been providing devices the staff and pupils attitudes have been transformed so that all those who were interviewed now regard their iPad as essential to their work.
- The ways that students use iPads varies; some use the device for a narrow range of specific activities, others employ the iPad across all their school and personal undertakings.

Assumptions

This case study is based on a number of assumptions. First is that whilst the data from the longitudinal attitude surveys does not clearly point towards pockets of unusual performance, this study assumes that local leaders will have a reliable understanding of which teachers are using tablets effectively. The second assumption is that there is no inherent quality in the devices that leads to better outcomes; it is the manner in which the teacher and learner uses the devices that makes the difference. Thirdly the case study assumes that this method of use is something that the teacher and the learners will be aware of.

Method

The Senior Leader at Guildford High School with responsibility for iPad development was asked for a list of teachers who he felt were making very good use of the iPads the School had procured. He provided a number of names and an English teacher was chosen because it was practicable to visit the school and interview her and the students in one of her classes all in a single day. The interviews followed a semi-structured approach and were recorded to enable detailed review. The methodology is described in Appendix 1.

Findings: Teaching

The teacher reported that when the announcement was first made that the school would be moving down a 1-1 iPad scheme she was sceptical of the educational benefits. Over time she has come to appreciate the value the devices bring. She described how iPads have changed the ways she teaches and the ways that students learn. She said that having an iPad means that she stands at the back of the classroom more. She did this initially because she wanted to have an eye on the screens of iPads students were using. She reported that this move has been very good for the dynamics of her lessons. She is no longer the

teacher at the front and this means that the students no longer view her as an absolute authority. They listen to their peers more, so she can step outside discussions, so that the back and forth bounces between students rather than always to and through the teacher. She believes that this has been easier to achieve with the younger girls in years 7 and 8 because they have had iPads all through secondary school. The interviews with the students did not elicit any comment from them on this changing dynamic.

She uses iPads to make some organisational and administrative work more straightforward, like passing work to students and then receiving it back from them. She finds the App Edmodo "incredibly useful". In lessons she may ask a big question and elicit lots of responses from them that they enter into Edmodo. The app then allows all the students to look at each other's answers and develop these further. She describes this facility as "really powerful". One of the students observed that it is "useful to share ideas because of course there are no right answers in English". This is a view of the subject that the teacher was pleased to hear the students had adopted. It was clear through the student interviews that the use of Edmodo for sharing is a routine and that they all see the value in the practice.

When giving feedback the iPads are not used much. The teacher uses the iPads where she has identified that they enhance either the process or the outcome. That means that many learning and teaching activities are untouched by iPads. As she states "I've really enjoyed the arrival of the iPads. I find my usage of it is pretty mixed, I find sometimes I use it all the time, other times I put it aside"

Findings: Learning

A common use of the iPad in the English lessons was for research. Internet research is a very common use of technology and perhaps somewhat devalued. The teacher explained that at A Level English the texts the students study can be very dense with unfamiliar terms, concepts and language. She asserted that searching, for either concepts or terms, enabled the students to tackle challenging texts like Dr Faustus with some independence. The students who were interviewed also remarked on this use of the iPad as empowering because it made them feel able to get a sense of text on their own before looking at it as a group.

The teacher also finds that essay planning can be enhanced through the use of the iPad. There are apps that are used such as virtual Post-Its for students to organise their ideas. The teacher observed that these approaches offer greater flexibility than working on paper and that this is "really useful for lower sixth essay planning".

When the students in the class were asked about their progress in this lesson all felt like they are going somewhere and that

they are going to do well. When the teacher was asked about this she thought that fact interesting as their written work is a bit weaker than most sets. She suggested that this may be because she is very clear about what they need to do to improve so the next step forward is clear and not a mystery.

Students all made the same comment about the introduction of the iPads. They all started by feeling doubtful about the initiative but now feel like the devices have added greatly to their learning. The range of use was noticeable. One student used the iPad for almost everything to do with school and her personal life, others were more discriminating, using their iPads in a smaller number of situations where they felt they added real value. Their teacher observed that "It suits girls in different ways and that is OK. You have to do the work as a teacher to work out what works for each of them. A girl like Mary uses it all the time so I support her in doing that".

Findings: Support

The teacher reported that she is constantly improving her skills with technology. She feels that her competency is evolving with her learning something new at every INSET session the school has arranged.

There is an INSET at start of each term. There are also hour-long sessions on something specific at regular points in the school year. These latter events have been most useful to our teacher. As she states a "... whole day is a bit overwhelming". One CPD event where teachers shared ideas in a kind of speed dating session "was amazing, you just got all these ideas; two of them you think 'I can't see any purpose to that in English' but five of them you think 'great'."

The school has created a group of expert teacher users of iPads. They provide support through email and face-to-face, our teacher says that they are a very useful source of help and guidance.

Discussion

The case study does represent just one teacher in a school and one group of students and so it would be very inadvisable to generalise from this evidence. That said, it is worth taking some time to compare the evidence from here with the wider evidence on tablets in schools.

One of the largest studies of the impact of iPads on classroom practice was the "iPad Scotland Evaluation" (Burden et al., 2012). The conclusions of the review were drawn from practice across 8 schools including 3 secondary. The research concludes that "use of iPads has enabled many more students to ... to engage in peer assessment and in group critique" and "promoted more

collaboration between [teachers] and students" (Burden et al., 2012, p. 10). These activities are the practices observed through the interviews at Guildford High School. It might be that iPads are particularly conducive to sharing and collaboration. A 2012 study of iPads in one site reported that students acknowledged that their tablets made it possible for them to use tools that support reflection, e.g. digital mind mapping and annotation of texts (amongst other uses) (Heinrich, 2012).

By contrast research has highlighted uses of the technology that was not reported by the interviewees at Guildford; for example enhancement of homework (Burden et al., 2012, p. 10) and development of greater independence in learners (Clark and Luckin, 2013, p.11). There may be many explanations of these discrepancies, most obvious is that this case study is focused on just one teacher and these other uses of the iPads may be happening in other classrooms at Guildford High School.

Another perspective on the case study comes from educational technology theorists. There are a number of maturity models for the employment of technology in teaching and learning. Dr Ruben Puentedura has proposed the SAMR Model (Puentedura, 2013). This model posits 4 stages in technology adoption. At the bottom of this ladder is 'substitution' where technology "acts as a direct tool substitute, with no functional change" (Puentedura, 2013, p. 10). Next technology "acts as a direct tool substitute, with functional improvement" which Puentadura calls 'augmentation' (Puentedura, 2013, p. 11). 'Modification' is where technology "allows for significant task redesign" (Puentedura, 2013, p. 12) and finally at the pinnacle of the model 'redefinition' is where there is "the creation of new tasks, previously inconceivable" (Puentedura, 2013, p. 13). Comparison of the practice in this case study with the model would probably place it on the second rung of the ladder; as all the teaching and learning developments the teacher and the students outlined in their interviews were ways that pre-existing practice had been moved into iPad use. These were not just 'substitution' because the iPads allowed the practice to be enhanced. For example the writing of sentences or short paragraphs on paper to crystalize learning was changed with the iPads into the writing of these in Edmodo. In Edmodo all the students could see all of their peers' ideas with ease. This would have been very difficult when they used paper. Although the practice is on the second rung it does not mean that it has less value than higher states in the model. Both teacher and the students were clear that outcomes are better with the use of iPads. Analysis of the work that is ongoing with iPads against a maturity model such as Puentadura's should be the basis for their further development rather than a basis for a judgement of the value of the 1-1 initiative.

Bibliography

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Heinrich, P. (2012) 'The iPad as a Tool for Education' NAACE and 9ine Consulting. Available Online http://www.naace.co.uk/get.html?_Action=GetFile&_Key=Data26613&_Id=1965&_Wizard=0&_DontCache=1341555048

Puentedura, R. R. (2013, May 29). SAMR: Moving from enhancement to transformation [Web log post]. Retrieved from <http://www.hippasus.com/rrpweblog/archives/000095.html>

Appendix 1

Case study Methodology

Definitions

Case studies generally are employed to gather a richer and more close-up view of phenomena. That is the intended benefit of this approach within the wider research on 1-1 tablet introductions. The case studies will attempt to answer this question; how are iPads making a greater (or markedly lesser) impact on the quality of learning and teaching in classrooms.

For the purposes of this research our cases will be individual classes with an individual teacher. The scope will be the practices and contexts that enable, facilitate and support the good practice over the course of the teaching timetable. The intent is to define two cases from the test schools that might provide a single written case study by the conclusion of the Spring Term 2016.

It would be better for the purposes of the research if these cases could be defined through an analysis of a dataset, most obviously around lesson observations or management judgements on the effectiveness of a teacher. The test schools do not gather such data sets. This means that the cases will be identified by school leaders based on their extensive experience of the quality of teaching within their school. Although this does introduce a judgement and a lack of objectivity to the selection of cases it must be acknowledged that lesson observations and formal staff assessments are also, at heart one professional's judgement of another.

The hypothesis underlying the case study approach here is that a number of factors might be enabling the use of iPads to be more effective. These are;

- the physical and cultural contexts of the class;
- the peculiarities of the students in the class;
- the attitudes and capabilities of the teacher; and
- the support structures provided by the school.

These sources of data will be used;

- lesson observation (where possible);
- interviews with approximately eight members of the students in the class;
- an interview with the teacher; and
- an interview with the senior leader who had chosen this teacher and class.

All of these will be semi-structured interviews, with scope for follow up questions to enable the gathering of greater detail.

Data Gathering Methodology

Data	Methodology	Comments
Lesson Observation	Watch the lesson and note iPad use both as directed by the teacher and independently by pupils	Written notes will be transcribed
Interviews with approximately eight members of the students in the class	These students should be chosen to be broadly representative of the group. They will be interviewed in pairs with a senior teacher present so that they can be as free from stress as possible. A common script will be employed as detailed in the Appendix: Interview Questions. A common script will be employed as detailed in the Appendix: Interview Questions	The interview will be recorded. This will be to allow for a more faithful analysis of the evidence presented. All involved will need to be aware of this ahead of the interviews.
An interview with the teacher	They should be interviewed in circumstances that maximise the likelihood of candour. A common script will be employed as detailed in the Appendix: Interview Questions.	The interview will be recorded. This will be to allow for a more faithful analysis of the evidence presented. All involved will need to be aware of this ahead of the interviews.
An interview with the senior leader	A common script will be employed as detailed in the Appendix: Interview Questions.	The interview will be recorded. This will be to allow for a more faithful analysis of the evidence presented. All involved will need to be aware of this ahead of the interviews.

Appendix: Interview Scripts

Interviews with pairs of the students:

1. Describe the classroom you have lessons with [insert teacher name].
2. I'd like to talk about the lesson we were all just in... would you describe that as normal, compared with all the lessons you have? What makes it different?
3. What is [insert teacher name] like?
4. What does [insert teacher name] do that is unusual or different to other teachers?
5. How are the iPads used in these lessons?
6. Can you tell me how you think the iPads effect the ways you learn?
7. Describe how you are given feedback on your work?
8. How much does the feedback help you make progress?
9. Are you able to focus and concentrate well in these lessons? Can you explain why?
10. How much do you work independently from the teacher?
11. Are you able to complete the tasks set in lessons?
12. How much do you enjoy these lessons?
13. How positive do you feel about these lessons?
14. How much can you share, discuss and collaborate with other students in these lessons?
15. What is this group of pupils like? Are they friendly, competitive, hardworking, helpful to each other?
16. Is there anything else you think I should know about the ways [insert teacher name] uses iPads with your class?
4. How would you describe these lessons?
5. What are the pupils like?
6. Are they unusual in any ways you can identify, either individually or in the group dynamic?
7. How are the iPads used in these lessons?
8. Can you tell me how you think the iPads effect the ways you teach?
9. Can you describe how you give feedback to your students?
10. Are you able to focus and concentrate well in these lessons? Can you explain why?
11. What opportunities do students get to work independently?
12. How much do the students enjoy these lessons? Why?
13. How positive do you think the students feel about these lessons?
14. What opportunities do the young people have to share, discuss and collaborate with others in your lessons?
15. What does [insert school name] do to enable you to be effective with iPads?
16. What teaching approaches with iPads seem to work well for you?
17. What training or development have you found particularly useful in relation to iPads?
18. Is there anything else you think I should know about the ways you use iPads with your class?

An interview with the teacher

1. How would you describe your skills with using technology to support learning; are you an expert, novice or between these two?
2. Describe the way you set up your classroom.
3. Do you do anything particular when using iPads with your classroom setup?
1. Why did you choose this teacher and these students?
2. What makes this teacher's practice so effective?
3. How much is this good practice a result of whole school initiatives and how much the individual brilliance of the teacher?
4. Is there anything else you think I should know about the ways [insert teacher name] uses iPads?