

## Mobile technology: a study on the impact on the role of the Initial Teacher Training (ITT) tutor

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### Abstract

This article examines an attempt by a team of Initial Teacher Training (ITT) tutors at the University of East London to evaluate the impact of mobile technology, and iPads in particular, on their role in the professional development of teachers. The study focused on the impact the iPads had on the tutor's own role as well as considering outcomes for trainee teachers undertaking school-based placements. The study found that the use of iPads raised issues to challenge and enhance established practice and procedures within the team, as well as issues of a technical nature relating to the possibilities and limitations of the hardware and software trialled.

**Keywords:** iPad; Initial Teacher Training; Applications; School-Based Training; Emerging Technologies.

### Introduction

*"The world has changed. But education has changed more slowly than anything else, and that's partly because it's hard for us to imagine it any way other than the way it has existed since the beginning of time." (Walden 2013)*

Across all sectors of education new challenges, opportunities and dilemmas face professionals at all levels and this is particularly true of the higher education sector. Exponential growth in the demand for higher education, significant decreases in government funding for education, the changing nature of knowledge, changing student demographics and expectations, and global competition in the provision of higher education and rapid advances in information and communication technologies

(Rajasingham 2011, p. 1) have all contributed to a quickening in the pace of change in the sector.

One response to this change has been increased utilisation of information and communication technologies in an attempt to enhance and refine existing, often paper-based, practices. Savage (2010) applied emerging technologies to the assessment processes used in teaching and assessing the ICT component of the Primary PGCE programme at the University of Worcester. The existing model of a paper-based portfolio had become 'a "scrap book" type portfolio and stakeholders questioned the value of collating such an extensive array of materials in relation to purpose, merit, authenticity and quality' and it was replaced with a web-based model. The benefits of this approach included 'ease of access and asynchronicity for tutors and trainees alike' and 'a more flexible approach to peer-to-peer sharing, discussion and feedback than had been possible with existing temporal and spatial limitations' (Savage, 2010, p. 4).

It was with potential outcomes such as these in mind that a group of tutors working on the PGCE Primary programme at the University of East London embarked on a year-long study to evaluate the impact of using mobile tablet computer devices (iPads) in their school-based training role. Typically, this role includes visiting up to 25 trainees completing School Based Training (SBT) placements in local schools. Each visit includes an observation of teaching, feedback, target-setting and pastoral support for the trainee, as well as moderation and discussion of trainee progress with, and central support for, the school-based mentor (usually the class teacher).

### The ITT landscape: contextual information

The current government is committed to reversing a trend of perceived falling national standards (DfE 2010). The consequence is a national context of change resulting in a significant remoulding of the education system with the aim of improving standards. As the initial training period is considered the most important professional development in a teacher's career (DfE 2010, p. 22), part of this national change is the intended 'reform' (DfE 2010, p. 9) of initial teacher education (ITE), including the shift from university- to school-based provision (DfE 2010, p. 3).

The transformation is evident, in part, in the refocusing of the Office for Standards in Education, Children's Services and Skills' (Ofsted) inspection foci. The inspectorate's judgements now evaluate outcomes for trainees, the quality of training across the partnership, and the leadership and management of the training partnership (Ofsted 2012a). Crucially, judgements will be made in consideration of the overall effectiveness of ITE partnerships. All this means that the ITE role which university staff traditionally adopted is also undergoing transformation.

The assessment of trainees needs to be conducted by school-based mentors, with tutors ensuring that provision meets trainees' individual needs, and that they are given sufficient opportunities to

*'learn from other professionals and that an "open classroom" culture is vital: observing teaching and being observed, having the opportunity to plan, prepare, reflect and teach with other teachers. Too little teacher training takes place on the job, and too much professional development involves compliance with bureaucratic initiatives rather than working with other teachers to develop effective practice' (DfE 2010, p. 19).*

Schools need different levels and forms of support from their higher education (HE) partner. In order to ensure trainees make required progress towards the Teachers' Standards for qualified teacher status (QTS), the partnership must ensure that adequately trained mentors are capable of meeting the needs of their trainees. Where mentors either lack experience, adequate training, or when they have misgivings about a trainee's progress the role of the university tutor is crucial. Tutors are expected to ensure trainees receive their entitlement, in terms of their individual training needs. To do this, tutors must ensure they have equal opportunities and access, requiring robust Quality Management procedures.

### Background

The University of East London is the second largest provider of Primary Initial Teacher Training (ITT) in England and Wales. Over the duration of the study, the number of trainees on the programme grew from 312 to 352 and there is an expectation that the number of trainees will exceed 400 for the academic year 2013/14. Staff numbers have remained steady during several years of growth in the trainee population. The university has a 'successful' (Ofsted 2012b) partnership with local schools. Many of the trainees go on to work in local schools after they qualify, often becoming school-based mentors themselves.

The area in which the partnership operates is predominantly east London and the Thames Gateway. The partnership includes 17 local authorities and 97 schools and has been described as having 'a strong sense of community-based partnership which meets a local and national need for high quality teachers and fully reflects the diversity of the local community' (Ofsted 2012b).

### Research question

In establishing the parameters for the study, the group identified areas in which they felt that the tablet computer would have a positive impact on the tutor role. From there it was possible to identify the following research question:

*'To what extent does a tablet computer (iPac) enhance the impact of the Professional Tutor, with particular reference to outcomes for trainees and outcomes for tutors?'*

### Methodology

The chosen methodology was a qualitative, action research model. Hopkins (1985, cited in Cohen et al. 2007, p. 15) describes action research as 'a form of disciplined inquiry, in which a personal attempt is made to understand, improve and reform practice', and it was felt by the researchers that as an impact-based study, this approach would be most appropriate in bringing about a change in existing practice. Evaluating outcomes for trainees would involve analysing and evaluating the quality and quantity of feedback and issues around communication more broadly.

The established model for recording lesson observations during visits was a paper-based one, with lesson observation and summary forms

## Mobile technology: a study on the impact on the role of the Initial Teacher Training (ITT) tutor

being completed in triplicate by tutors and school-based mentors. It was anticipated that an electronic approach to recording observations might enable tutors to reduce the amount of paper generated, as well as making sharing the observation records simpler.

Both tutors had several years' experience working with the university in the capacity of a professional tutor, a role which involved tutoring trainee teachers on their placement. The duties of a professional tutor included:

- Observing and assessing trainees teach as well as giving feedback (to the trainee, mentor and all appropriate parties) on all aspects of teaching related to the Teachers' Standards (2012).
- Responding to trainee queries in regard to any aspect of their teaching as well as any issues within the placement that may arise.
- Communicating with schools (mentors, class teachers and senior management: Head Teacher, Deputy Head Teacher, etc.).
- Writing references for the trainee based on their progress on placement.

### Case study 1

The iPad Project was born from a recognition of the impact of the iPad on professional and organisational effectiveness. The following observations were made during a pilot period designed to explore options, enable freedom and to inform future strategy for research, tutor support, document management and funding allocation.

#### *Issues interfering with tutor effectiveness*

Emailing documents between PCs, Macs and tablets can be problematic, as different systems format text documents in different ways. Even software, and iPad applications, that transfer documents between the popular proprietary formats do not operate seamlessly. Layout features may be lost, fonts replaced and, in particular, graphics, tables and columns pose placement problems. As a consequence, communication via documents, rather than simple text or email, requires greater consideration.

Historically, observation and summary assessment forms had been completed in triplicate, a copy each going to the student and their mentor, and one being

retained for programme records. To recreate this expectation electronically, mentors' or school email addresses are required. As schools are likely to have their own policies and practices regarding email correspondence, the security of such communication of information comes into question.

The management of electronic documentation on a previously paper-dominated programme – the storage and security, including secure destruction – also presented issues for the team. However, electronic versions of observation forms were prepared and trialled, in terms of writing, editing, saving and sending. To enhance effectiveness, a summary form with pre-filled Teachers' Standards was prepared. The irrelevant standards could then be efficiently deleted during a visit, negating the need to type them in. The impression is that a strategic shift is necessary, to make the transition from paper to electronic storage.

#### *Exploration of effectiveness*

Taking email out of the equation by sharing files and folders via 'the cloud' and using 'Dropbox' (predominantly), it is possible to save trainees' documentation, which is then accessible through logging into the account from any other device connected to the internet.

Given the iPad's built-in cameras and microphones, the tutor embarked on exploring the potential of audio and video feedback, with the help of various 'apps'. The greatest success experienced was through the use of YouTube, via the iPad camera. The tutor was able to provide feedback to trainees, in their absence, by recording his thoughts as a video file, uploading the file to the YouTube servers, and simply sending trainees the link. This method means that the size of emails is kept to a minimum, and the possibility of being unable to send a file due to size constraints is removed.

Having begun to use this approach regularly, trainees were provided with broader, generic feedback, based on visits to them all. The tutor recorded welcome messages at the start of their school-based placement (SBT). He prepared a video to support them when being observed, and recorded videos at various points throughout their School Based Training placements to generally guide and reassure. Evidence of the impact of this work initially came in the form of verbal feedback from trainees. 'It's different,' they said. Some were surprised, then expressed interest in the approach. One trainee said, 'I've changed the way I evaluate my lessons, since watching your video.'

*Trainees' use of IT*

A trainee agreed to share her QTS standards tracker (the document forming the assessment vehicle for professional practice) via a shared file utilising Dropbox. The Dropbox terms and conditions make reassuringly accessible reading and it was discovered that 250 MB are added to one's online 'ration' each time other people download the Dropbox software due to a recommendation. The trainee proved to be rather well organised and no issues were encountered with viewing, checking and sharing files.

*As module leader*

Following a team moderation meeting it became evident that cloud hosting of master documents might make things easier. It was decided to invite all tutors to contribute to a shared folder, in which all documents relating to the assessment could be saved. Tutors had the choice of installing the cloud software or accessing the documents via a web page. Either way it was able to add or edit the documents available to the team, without generating new copies.

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**Case study 2**

*iPad Applications (apps) Used*

Applications used to support the role of this tutor: 'Pages', 'Camera', 'Mail', 'Zen brush', 'Calendar', 'Safari', 'Photos', 'Dropbox', 'FileApp' and 'Numbers'.

*App usage and function*

This tutor used 'Pages' to carry out observations of all trainees that he was responsible for. Two forms are required to be filled in: the first is called a 'commentary form', which is where a running commentary of all evidence provided is recorded. The second form is called a 'summary form' which is where a summary of evidence is recorded as well as targets to aid the trainee to meet the Teachers' Standards (2012).

Below is a review of the various applications used by the tutor to support his role as a professional tutor:

*Pages and camera*

The notion of typing onto the iPad and observing the trainee was a difficult process at the start. The issue was typing quickly enough to capture the evidence that was being provided by the trainee while teaching, which included key teaching points made by the trainee teacher, interaction with the children, class dynamics, etc. On the iPad, it was possible to create shortcuts for typing, eg chn = children, which made it easier to type while capturing the key information required to support the trainee. It was also discovered that photos could be taken using the 'camera app' of various resources used by the trainee or work that the children produced and to paste the photo into the commentary form. This proved to be an invaluable method as it allowed for in-depth discussions and critical reflection upon what the trainee had either written, made, drawn, etc. For example, on one occasion a trainee had drawn a number line on the interactive whiteboard but made an error which caused an error in the children's ability to carry out a calculation mentally using the tool of the number line. The tutor was able to present a photo of the number line and allow the trainee to reflect upon what they had drawn and the misconception that they had caused in the children's learning.

*iPhone – iCloud*

The tutor also owned an iPhone, so the moment a commentary or summary form was created, it was duplicated onto the iPhone once both devices were within wi-fi range. This proved to be very useful in the event that a form was requested. For example, a mentor requested a copy of a summary form, which was sent immediately upon receiving the email from the mentor. The forms were also transferred to iCloud, which is a virtual domain to store documents and data, which can be retrieved from mobile devices, eg a MacBook.

*Mail*

Many schools that the tutor works in allow access to their wi-fi network, enabling the forms to be sent immediately. This was very useful in sending copies of forms, handbooks and a record of discussions (between the tutor and mentor) instantly to the mentor or to other members of the school at their request. The iPad also synchronised with the University's Outlook addresses, which proved invaluable for contacting

## Mobile technology: a study on the impact on the role of the Initial Teacher Training (ITT) tutor

trainees and staff while 'on the go'.

### Safari

This is the 'internet browser' that comes as a standard application on the iPad. The tutor (in a school that allows access to its wi-fi) was able to access the internet while in discussion with a trainee. On one occasion, there was an issue with a trainee's subject knowledge in science. The tutor was able to access the internet to show the trainee the correct information on what they had taught.

### Numbers

Part of the tutor's role is to keep a record of each of the trainees' progress during the course of their placement. Numbers is a spreadsheet application, which allowed the tutor to store and record the trainee's attainment during their placement and then send this information to the administrator at the university to update the master spreadsheet.

### Calendar

The ability to synchronise appointments including school visits, tutorials, etc. with the calendar on Outlook at university and with the iPad and iPhone was a very valuable tool. Again, due to the iCloud function, once an appointment had been inserted into the calendar, this synchronised on all devices including the iPhone. Hence, the tutor received emails from trainees needing to reschedule their visits due to circumstances beyond their control and he was able to reschedule the appointment and to make the necessary changes to school visits.

## Conclusion

The implications tutors drew from this study could be categorised as either technical or procedural. While the software and hardware used were found to have the potential to enhance outcomes for both trainees and tutors in some ways, there were some significant limitations. Equally, the existing working procedures within the university meant that a new way of working would sometimes be required to fully integrate the use of such technologies into the daily practice of tutors. Careful note would also need to be taken of ethical considerations, particularly around storage and sharing of data. Outcomes for tutors were optimised when the iPad was used creatively to enhance the tutoring process rather than simply to replace paper methods with electronic ones. The use of apps for audio/visual feedback, file sharing and

research had a particular impact on tutor outcomes while communication processes were also enhanced. This finding was also reflected in trainee outcomes, with audio/visual feedback proving to be popular and effective. It will be important in future to gauge whether this impact is a result of the iPad as a 'gimmick' or whether such an impact can be sustained in the longer term. Importantly, none of the outcomes from the case studies involved insurmountable difficulties for the researchers; most limitations could be addressed through adapting policies and procedures, communicating effectively or increasing familiarity with the equipment. As the applications themselves improve, some of the reported difficulties, eg inconsistencies in formatting, may become less significant.

## References

- Cohen, L., Manion, L. and Morrison, K. (2007) *Research methods in education*, 6th edn. Abingdon: Routledge.
- DfE (2010) The importance of teaching – The Schools White Paper 2010. Accessed online 7 February 2013. Available at: <https://www.education.gov.uk/publications/standard/publicationdetail/page1/CM%207980>
- Ofsted (2012a) Responses to Ofsted's consultation on initial teacher education inspections from September 2012: an evaluation report. Accessed online 7/2/13. Available at: <http://www.ofsted.gov.uk/resources/responses-ofsted-consultation-initial-teacher-education-inspections-september-2012>
- Ofsted (2012b). University of East London Partnership. [Online] Ofsted. Report number 398733. Available from: <http://www.ofsted.gov.uk/inspection-reports/find-inspection-report/provider/ELS/70077> [accessed 5 February 2013]
- Rajasingham, L. (2011) 'Will mobile learning bring a paradigm shift in higher education?' *Education Research International*, 2011, [Online]: doi: 10.1155/2011/528495 [accessed 11 January 2013]
- Savage, M. (2010) 'Assessment of and for learning in Primary PGCE ICT Initial Teacher Training at the University of Worcester'. *Pebblebash 2010*. [Online] Available at: <http://archive.alt.ac.uk/alt.newsweaver.co.uk/www.pebblepad.co.uk/pp2010/cs19.pdf> (Accessed 11 January 2013).
- Walden, C. (2013) 'World class: a superschool for the global age', Daily Telegraph, 04 February [Online] Available at: <http://www.telegraph.co.uk/education/9831417/World-class-a-superschool-for-the-global-age.html> (Accessed: 06 February 2013)

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### Application list

Apple Inc. (2012) *Calendar* [Ipad application].  
Available at://<http://www.apple.com>

Apple Inc. (2012) *Camera* [Ipad application].  
Available at://<http://www.apple.com>

Apple Inc. (2012) *iCloud* [Ipad application].  
Available at: <http://www.apple.com>

Apple Inc. (2012) *Mai* [Ipad application].  
Available at://<http://www.apple.com>

Apple Inc. (2012) *Safari* [Ipad application].  
Available at://<http://www.apple.com>

Apple Inc. (2010-2012) *Numbers* (Version 1.7.1 (741)) [iPpad application]. Available at://<http://www.apple.com>

Apple Inc. (2010-2012) *Pages* (Version 1.7.1 (741)) [iPpad application]. Available at://<http://www.apple.com>

DigiDNA SARL (2013) *Fileapp* [smart devices application].  
Available at: <http://www.digidna.net/fileapp>

Dropbox Inc. (2012) *Dropbox* [ application]. Available at:  
<http://www.dropbox.com>

PSOFT Zen *Brush* (Version 1.25) [Ipad application]. Available  
at: <http://www.apple.com>

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