

Views and experiences of Information and Communication Technology coordinators towards the implementation of a Virtual Learning Environment in Primary Education in England

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Abstract: All primary school children in England and Wales are expected to have access to a personal online learning space, commonly referred to as a Virtual Learning Environment (VLE). However, since their introduction evidence suggests primary schools are experiencing difficulties with the use of VLEs on a whole school level. A qualitative case study approach was used to identify the views and experiences of six ICT coordinators towards the implementation and continued use of VLEs in primary schools in England. Data was collected using semi-structured interviews. There were four key themes and various subthemes identified. The main themes included methods of implementation, barriers towards the use of a VLE, increasing the uptake of the VLE and benefits of a VLE. This study identified how to integrate the VLE, the main barriers teachers face and possible suggestions to overcome these barriers. The study provides some consideration and possible debate as to whether the introduction of a VLE into primary schools in England has been successful.

Keywords: virtual learning environment, information communication and technology, views and experiences, qualitative, primary education

1. Introduction

In 2005 the United Kingdom (UK) Department for Education and Skills (DfES) published its e-strategy, *Harnessing Technology: a system wide approach to the application of Information and Communication Technology (ICT) in education*. As part of this strategy, the government laid down the expectation that by 2010 all pupils in England and Wales should have access to a personal online integrated learning space, often referred to as a Virtual Learning Environment (VLE). Prior to this government initiative VLEs were relatively unheard of in primary schools in the UK. In 2003 the British Educational Communications and Technology Agency (BECTA), a government agency set up in 1997 to ensure the delivery of effective and innovative use of technology in schools, failed to identify a single UK primary school using a VLE. Since then there has been a rise in the number of VLEs assisting with the delivery and facilitation of learning in primary schools. Yet despite these increases BECTA (2009) highlights that primary schools in England and Wales are experiencing difficulties with the implementation and development of a VLE on a whole school level.

To attempt to understand the reasons for this there are to date four relevant studies that seek the views of pupils and teaching staff towards the VLE in primary schools (Berry 2006, Aubrey-Smith 2007, Massey 2010, & Rourke, 2010). Yet interestingly, to my knowledge, there are no studies available that specifically identifies the experiences of primary school ICT coordinators use of integrated learning environments. In recent government reports the ICT coordinators are considered the "driving force behind improvements in the school's ICT teaching and learning" (Ofsted, 2002: p7), and "the effectiveness of the ICT coordinator or subject leader was critical to the success of the good and outstanding schools" (Ofsted, 2011: p18). Understanding the experiences of primary school ICT coordinators use of the VLE may be helpful to know in order to maximise the uptake of a classroom VLE by students and teachers alike.

The current study, therefore, examines the individual views and experiences of six ICT coordinators working in Barnet, North London, UK towards the implementation of a VLE into primary schools. The study specifically aims to address the following:

- How have subject leaders introduced a VLE into their school?
- What barriers they faced during the implementation of a VLE and the successful methods employed to overcome these?
- What current issues the subject leader or other staff members are facing and how they plan to deal effectively with these?
- Overall have VLEs been effectively integrated and used by primary school teachers since their implementation?

2. Method

2.1 Participants

A local website, named the Barnet Partnership School Improvement (BPSI), provided details of the ICT coordinators working in Barnet, North London, UK. Six ICT coordinators employed in English primary schools were purposively selected to participate in the study. As shown in Table 1 the study sample reflected a variety of ICT coordinators of varying levels of experience and working in a range of primary school settings.

Table 1: Demographic detail of participants

Participant number	Gender	Position*	Number of Years Teaching	Number of Years as ICT Coordinator	Number of Pupils in School
1	Female	AST	18 Years	17 Years	200-250
2	Female	CT	15 years	10 years	200-250
3	Female	AST	13 Years	8 Years	150-200
4	Female	CT	6 Years	5 Years	200-250
5	Female	AST	12 Years	10 Years	700-750
6	Female	DHT	28 Years	12 Years	300-350

*AST = Advanced Skills Teacher; CT = Class Teacher; DHT = Deputy Head Teacher

2.2 Procedure

Data was collected using semi structured interviews, and these were guided through the use of a topic guide as shown in Table 2. Interviews were undertaken in spring 2012 and took place at the participant's own school. All interviews were digitally audio-recorded through the use of a microphone. The length of interviews ranged from 20 minutes to 40 minutes. Interviews were transcribed verbatim by an external source.

Table 2: Topic guide used in semi-structured interviews

1) How did you introduce the VLE? 2) Which parts of the implementation process did you find successful? 3) What were the main barriers you faced? 4) What strategies did you develop to overcome these barriers? 5) Do you feel the VLE has been successfully implemented in your school? 6) What were the main contributions to the success of the VLE? 7) Did you experience any reluctance from members of staff? 8) What is the management structure of your VLE? 9) How do you assess the effectiveness of the VLE in your school? 10) Have you managed to maintain momentum? If yes how? If no, why?

2.3 Data Analysis

Interview transcripts were analysed using a content analysis approach (Cohen, Manion and Morrison, 2007). Transcripts were read through several times to become familiar with the data and to look for emerging patterns. Pieces of the text were then coded with descriptive words which were sufficiently close to that which it was describing. Following the coding of data the pieces of text were then placed into categories, and entered onto charts in the computer software package Microsoft Excel to assist in managing and comparing the data. The transcripts were again reread, searching for data to support or reject the preliminary categories or until no new themes emerged.

2.4 Ethical Considerations

Ethical approval was sought from the University of Hertfordshire Ethics Committee. The study was undertaken in accordance with the British Educational Research Association (BERA, 2011) guidelines, and written informed consent was obtained prior to participation.

3. Results

There were four main themes identified each with various subthemes. The themes are illustrated using quotations from the research participants followed by their ID number in brackets.

3.1 Theme 1 Methods of implementing the VLE

3.1.1 Support from management

Most participants recognised they, the ICT coordinators, were the driving force behind the implementation of the VLE. Yet in order for this to be successful they highlighted the importance of support from the head teacher and members of the Senior Leadership Team (SLT) in the running of the VLE. It was also important the VLE was seen as a priority issue in the school.

“You’ve got to have someone really pushing it from the very top down” (Participant 5)

3.1.2 Staff Training

It was recognised that teaching staff should be given an adequate amount of time and training to develop their understanding of the VLE and ICT skills. Five of the participants organised staff development meetings prior to introducing a VLE. In addition the ICT coordinators offered one to one training and support for teachers requiring extra help, as well as ‘refresher’ training sessions throughout the year.

“I actually sat individually with teachers, so that we could actually develop something that was useful for them” (Participant 3)

3.1.3 Piloting Process

Three of the participants piloted the VLE within one classroom, usually their own class, and then approached another willing member of staff to pilot the VLE in that teacher’s year group. This was thought to be advantageous in that the piloting process may brainstorm ideas to further aid its implementation. It could then be used to highlight the benefits with remaining members of staff.

“I..sat down with (the Year 2 teacher)..and showed her how to do all the editing and she was somebody who really went away and developed it and ended up coming up with something that was far better than I’d been playing around with”. (Participant 3)

3.1.4 Children

All but two participants involved children in the process of implementing the VLE. It was noted some children grasped using the VLE quickly and were then selected to upkeep the homepage of the VLE. Also those children who were confident in being able to use the VLE were paired up with children who were less confident to offer support i.e. a “buddy” system.

“I had a group of children called my website monitors...and then the website monitors went into classes to teach (other children) and teachers” (Participant 6)

3.2 Theme 2 Barriers towards the use of a VLE

3.2.1 Enthusiasm

Participants indicated their members of staff were concerned with a number of issues including user friendliness, fear, poor ICT skills and concerns regarding time and workload. This appeared to result in immediate reservation by staff towards the uptake of the VLE. Similarly in children there was greater enthusiasm initially but this was noted by some participants to be short lived. It was recognised that the content on the VLE needs to be updated regularly to maintain children’s interest.

“I thought they’d go ‘okay, that’s cool, let’s go with it’ but they didn’t” (Participant 4)

3.2.2 ICT Skills

Participants reported that staff who were ‘good’ with ICT skills were more likely to use the VLE. Despite initial teacher training in using the VLE, ICT skills remained an issue with members of staff. Participant 2 and 3 thought it was related to a lack of confidence. One participant suggested the importance of teachers to practice their ICT skills soon after the delivery of the training. A couple of participants discussed the difficulties in embracing staff to use the VLE with some members of staff becoming defensive and embarrassed by their lack of understanding and reluctant to ask for help.

“..technophobes – generally it’s more the fact that ‘this is new and scary and I don’t know what to do with it, so I can’t possibly teach it’.” (Participant 5)

3.2.3 Time and workload

Three of the participants reported a lack of time to be a key concern of staff members, and staff perceived the VLE as creating extra work and pressure for teachers, particularly towards maintaining, updating and creating pages and resources to use online.

“Staff spoke about the time to actually create their pages.” (Participant 1)

3.3 Theme 3 Increasing the uptake of the VLE

3.3.1 Involving parents

Interviewees 3 and 4 discussed how they delivered training for parents including the benefits of a VLE and how to use it. Another participant has attempted to communicate with parents by creating a ‘parents area’ on the VLE and uploading prize draws, competitions, treasure hunts and school newsletters but so far with limited success. Introducing parental logins appears to be a future area the participants are considering.

“If we...nab those parents...early on and have...an expectation that there’s the VLE going on...they could become more involved in their children’s education...using the VLE.” (Participant 3)

3.3.2 Links throughout the curriculum

Four of the coordinators discussed how the VLE is or at least should be built into the curriculum of a school. This would enable the VLE to be actively used in lessons as part of the ICT and creative curriculum. It is suggested that it may also assist teachers and other coordinators see the relevance of the VLE and the potential impact it could have on their subject area.

"I delivered a staff meeting showing how we could actually use the VLE to support that Literacy work that we were doing and I felt that that may encourage the Literacy coordinator." (Participant 3)

3.3.3 Avoiding duplication

It was considered important that the VLE is perceived to help reduce workload for teachers. A suggestion made by participants 2 and 5 was to replace every day administrative tasks such as the school diary and daily notices onto the VLE.

"We used to publish newsletters on paper, every week...that was a phenomenal amount of investment in paper and time...And now it's all online." (Participant 6)

3.4 Theme 4 Benefits of the VLE

3.4.1 Out of school learning

The opportunity to use the VLE at home and out of school provides increased learning opportunities for students. Three interviewees discussed how the uploading of resources to be available outside of school could support the teaching of a class topic. The majority of participants discussed how uploading homework and other resources improved children's learning, as well as allowing children to complete work at home and hand in via the VLE.

"My Year 5 class, who've just started doing hand-ins, they say 'oh, it's so much better to do it like that.'" (Participant 4)

3.4.2 Online Communication

With the use of forums, instant messaging, votes, publishing, web design, hyperlinks, online hand-ins, videos and photos children have increased opportunity to virtually communicate with classmates both in and outside school aiding social development, as well as with children in schools around the world.

"We had like little discussions...it made people come, log on and find out if anyone's messaged anything back, just to get them on there and interacting with it. Pupil wise; my class loved it" (Participant 4)

3.4.3 Promoting E-Safety

Three coordinators discussed how the VLE has been used throughout their school to promote and educate the children about their e-safety. These participants discussed a number of examples of issues where there were discussions on what constitutes appropriate and inappropriate material online. This has helped educate children as well as raise awareness throughout the school of uploading only appropriate material and the consequences of breaking established rules.

"They know what to do if they come across something that their not comfortable with. And we just rely on them reporting it to me and they do." (Participant 6)

4. Discussion and conclusion

Effectively implementing an integrated learning environment, or VLE, was dependent on a supportive head teacher and the SLT viewing the VLE as a priority. It was also considered good practice to pilot the VLE into teachers' classrooms, ensure adequate staff training is delivered and involve children in managing the VLE. In particular it appears evident then that the varying levels of ICT capability among staff members need to be reflected in the tailoring and delivery of training. Possibly, for example, by creating beginner, intermediate and advanced class workshops towards ICT skills and using the VLE in general.

The main barriers to the uptake of the VLE included lack of enthusiasm, poor ICT skills, and time and workload pressures. It seems reasonable to suggest that staff need time to master the tools

and skills associated with the use of a VLE. Ideas to overcome these barriers and increase the uptake of the VLE were reducing the perceived workload of the VLE, involving children and parents, and linking the VLE with the curriculum. The involvement of parents was a commonly stated suggestion. BECTA (2003) postulates that the VLE could be used to involve parents within the learning process of their children. Indeed the most regular heard question at parents' evening is parents asking how they could help with their child's learning at home. Furthermore since children in primary education are reported to spend three times longer using ICT at home than they do when in school (DfES, 2001), BECTA's (2003) suggestion may seem logical.

A personal interest was whether VLEs have been effectively integrated and used by primary school teachers since their implementation. This however has been slightly difficult to answer convincingly from the findings of my research study. There were reported benefits of the VLE that emerged through the analysis of the findings, and these were not intentionally sought. These benefits included out of school learning, online collaboration and promoting e-safety. However it does appear from five of the six ICT coordinators I interviewed, and also from my own practice, that VLEs are still in their early deployment in primary schools in England. To convincingly establish if VLEs have been successfully integrated in primary schools in England further areas of research are needed. This may include using interviews or surveys, to gain the experiences and opinions towards the VLE by other members of the school environment including the teachers, children and parents. Ultimately, an integrated VLE in primary schools in England is likely to be perceived as successful when it offers educators the opportunity to provide activities and resources which will engage students and promote independent inquiry; thereby extending their learning outside of the classroom.

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