University of Chichester
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Technology: an undervalued and underused resource to support teaching and learning in primary schools?

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The reasons for my choice of research

- Statistics from Nesta.

- Personal classroom experience.

- Results of the 2012 Newly Qualified Teacher Survey.

- Formal classroom observations of student teachers.

- Selwyn's 2008 critical analysis of the implementation of information technologies in the United Kingdom.

- The desire to develop the quality and relevance of the students' experience.

Review of the literature

Some key sources

- **Becta (2004)** *A review of the research literature on barriers to the uptake of ICT by teachers*. Coventry: Becta
- **Ertmer, P.A. and Ottenbreit-Leftwich, A.T. (2010) '**Teacher technology change: How knowledge, confidence, beliefs, and culture intersect' *Journal of research on Technology in Education* 42 (3), 255-284
- **Hennessy, S., Warwick, P., Brown, L., Rawlins, D., and Neale, C. (eds.) (2014)** *Developing interactive teaching and learning using the IWB: Teacher Resource*, Milton Keynes: Open University Press.
- **John, P., and Wheeler, S. (2008)** *The Digital Classroom – Harnessing Technology for the Future.* Oxon: Routledge.
- **Kennewell, S., Tanner, H., Jones, S. and Beauchamp, G. (2008)** 'Analysing the use of interactive technology to implement interactive teaching' *Journal of Computer Assisted Learning* 24 (1) pp. 61–73
- **Koehler , M. Mishra, P., Akcaoglu, M. and Rosenberg, J (2013)** 'The Technological Pedagogical Content Knowledge Framework for Teachers and Teacher Educators' in *ICT Integrated Teacher Education: A Resource Book Commonwealth Educational Media Centre for Asia* New Dehli
- **Livingstone, S. (2012)** 'Critical reflections on the benefits of ICT in education' *Oxford Review of Education* 38 (1) pp. 9-24
- **Puentedura R. (2013)** *Technology In Education: A Brief Introduction – weblog* video cast.
- **Rogers, E. (1995)** *Diffusion of Innovations 4ᵗʰ edition.* New York: The Free Press
- **Selwyn (2008)** *Constructing the challenge of digital didactics: the rhetoric, remediation and realities of the UK Digital Curriculum* 4 (1) Seminar.Net International Journal of Media Technology and Lifelong Learning.
- **Selwyn, N., Potter, J., and Cranmer, S. (2010)** *Primary Schools and ICT – Learning from Pupil Perspectives.* London: Continuum International Publishing Group.
- **Warwick, P., Hennessy, S. and Mercer, N. (2011)** 'Promoting teaching and school development through co-enquiry: Developing interactive whiteboard use in a 'dialogic classroom'. *Teachers and Teaching: Theory and Practice*, 17 (3), pp.303-324.

Review of the literature

Key themes emerging from the literature

- **Why should ICT tools and resources be used to support teaching and learning?**
  - **Meeting the Standards**
  - **The inherent benefits of using ICT**
  - **The use of technology in education**
  - **The effect of technology on learning**
  - **The impact of interactive whiteboards on teaching and learning**
  - **Technology as an agent for transformation**
- **What factors influence the use of ICT tools and resources to support teaching and learning?**
  - **Perceived or actual barriers to the use of technology**
  - **Recognising the potential of technology**
  - **Developing knowledge, skills and understanding**
  - **Attitudes towards the use of technology**

Research questions

- How effectively do the trainee teachers use ICT tools and resources to support teaching and learning?

- What factors influence the student's use of ICT tools and resources to support teaching and learning?

- What does the university do to reduce the students' internal barriers to the use of ICT tools and resources to support teaching and learning?

Methodology

formal lesson observation feedback
given to 10% of undergraduate students
throughout their programme

questionnaires ⟶ interviews

documents relating to the
'Teaching ICT' module taken by
undergraduates in year 2

The data

Self-administered questionnaires - *completed by 66 final year undergraduate students, 19 postgraduate students, 13 university link tutors and six school-based mentors.*

Semi-structured interviews - *carried out with three undergraduate students, two postgraduate students, two university link tutors and a school-based mentor.*

Documentary analysis - *of the feedback from formal classroom observations and materials relating to the Teaching ICT module undertaken by undergraduates in year 2.*

What I found out

- Trainees tend to judge their use of technology to support teaching and learning as 'good' or better, although it was rarely used to enhance the children's learning.

- A number of link tutors and school-based mentors appeared unaware of what constitutes engaging, effective use of ICT tools and resources .

- School level barriers still have a significant impact on the trainees' use of ICT tools and resources in the classroom.

- There was little mention of teacher level barriers impacting on their use of new technologies .

- Trainees appreciated and benefitted from university-based experiences.

- Trainees received very limited formal feedback concerning their use of ICT tools and resources in the classroom.

Conclusions

In relation to university-based activity it is suggested that:

- Staff should seek early identification of 'traditionalists' and 'refusenicks'

- Offer additional opportunities to analyse innovative ways in which new technologies can be used to enhance learning.

- Explore the use of readily available ICT tools and resources to transform learning, while explicitly modelling justification of their use and value in a range of relevant contexts

- Exploit opportunities offered by the change in the national curriculum to review how learning is structured and the tools with which it may be achieved placing the emphasis on the production rather than consumption of digital resources.

Conclusions

In relation to school placements it is suggested that:

- Identify schools and individual teachers within the school partnership that exemplify best practice in the use of new technologies.

- Actively develop link tutors' and mentors' digital literacy and therefore their awareness of the potential of ICT tools and resources.

- Ensure the students receive more detailed feedback concerning their use of ICT in the classroom to support learning as well as teaching.

Looking to the future

Any questions, thoughts, observations?

I am especially interested in where you think my research might go next