

TEACHERS TAUGHT, LESSONS LEARNT: EXPERIENCES OF USING VIDEO TO SUPPORT TEACHER LEARNING ON THREE CONTINENTS.

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Abstract

Current models for teacher education are not delivering enough teachers of sufficient quality across the developing world (UNSECO, 2015). In 2005, UNESCO suggested that ‘Training models for teachers should be reconsidered in many countries to strengthen the school-based pre-and in-service training rather than rely on lengthy traditional, institutional pre-service training’ (p3).

Increasingly, modes of open and distance learning, particularly the application of accessible and affordable mobile technologies, are seen as vital to support new approaches in the large-scale provision of teacher training and development. Sustainable Development Goal Four (UNESCO, 2015), with its emphasis on the quality of the education that children receive, means that understanding the potential of mobile technologies to support teaching learning and development, has become an urgent issue.

This paper will focus on innovative approaches taken by the Open University UK, to school-based pre- and in-service teacher training, using video, across 3 continents – Africa, Asia and South America. It will use case studies to demonstrate various approaches, surfacing teachers’ voices and experiences of new ways of learning. It will share the successes and challenges of using video to support teacher education at scale and describe the impact that the training has had on teachers and their teaching. By examining common features across the examples presented, the paper will draw on models of teacher learning and video use and demonstrate that technology can add value to teacher development activities provided that appropriate support, consistent with the pedagogy that is being promoted, is in place.

Introduction

The EFA Global Monitoring Report UNESCO (2015) highlights the continuing shortage of teachers across the developing world despite the focus on universal primary education. In an attempt to meet this demand, teacher quality has sometimes been compromised with many unqualified or under-qualified teachers being employed (Education International, 2007); teacher education is therefore under scrutiny.

National policy frameworks (eg India (2005), Kenya (2012), Zambia (2013)) emphasise classroom pedagogy as a way of improving the quality of education and highlight the importance of learners being actively involved in lessons. However, teacher education courses (both pre-service and in-service) are often not fit for purpose; they do not model participatory pedagogy and are highly theoretical (O’Sullivan, 2010). New models of teacher education are required, which operate at scale, are consistent with policy aspirations and reflect current social trends, such as available and affordable mobile technologies. The current emphasis on quality in SDG 4 means that developing new models of teacher education and understanding the potential of mobile technologies to support teacher learning and professional development, has become an urgent issue.

The Open University (OU) has a strong record in developing appropriate, professional learning programmes for teachers and teacher educators, which use accessible and affordable mobile technologies to deliver high quality resources. In collaboration with teachers and teacher educators all over the world the (OU) has developed written, audio and video material to support teacher learning. The internet is used to deliver high quality Open Educational Resources (OER) and learning opportunities; content is supplied on SD cards, on memory sticks and on CDs as well as in print form if required. Networked computer labs, tablet computers, mobile phones and online learning platforms all provide access to resources. A significant component of this work is the use of video to support teacher learning.

This paper presents four case studies from India, Bangladesh, Peru, and Africa, specifically looking at the use of video and the balance between technology and support in delivering change in teaching practice. The case studies illustrate the successes and opportunities presented by video as a learning tool, alongside some of the challenges and difficulties. We explore the making of authentic video, mobile phones as a delivery mechanism, the importance of mediation, the use of professionally produced films and the use of ‘home-made’ video by

teachers in their own classrooms. We will start by highlighting what is known about teacher learning in order to demonstrate the particular benefits that video can bring.

Teacher learning

Learning to be a teacher is a complex and often haphazard process (Leach, Moon 2008). It involves learning to make many rapid decisions in a short period of time (McIntyre 2002). There are many frameworks for analysing teacher learning and developing teacher education programmes (eg Putnam, Borko 2000, Malderez et al. 2007, Mutton, Burn & Hagger 2008) but a model which we have found to be particularly helpful comes from Shulman and Shulman (2007). They suggest that teacher learning involves:

- building a **vision** of the sort of teacher that it is possible to become;
- being **willing and motivated** to learn, which means that teachers' learning experiences need to be relevant and authentic;
- being able – possessing the **knowledge, and understanding** required to be an effective teacher, including subject knowledge, pedagogical content knowledge and (increasingly) technological, pedagogical content knowledge;
- being able – possessing the **practical skills** required, recognizing that practice is complex and develops over time.

At the core of their model is **reflection and collaboration**.

The implications for teacher education programmes is that they should provide the opportunity for teachers to develop in all of these areas and should include significant practical elements.

It is widely accepted that pre-service teacher training courses in many developing countries are too theoretical and do not involve enough time in school (EFA GMR team 2013, SEIA 2007). They are not what Dyer terms 'ecologically valid' (Dyer et al. 2004) which means that courses do not reflect the culture and conditions of the contexts in which teachers work (Polly, Hannafin 2011, Manteau 2012). Teacher education programmes don't model participatory pedagogy with the result that schools remain dominated by teachers talking at large numbers of passive students. Teacher educators often have a deficit model of teachers (Dyer et al. 2004) blaming them for failing to implement the sort of learner centred practices embedded in many national policy frameworks, rather than examining their own practice. Murphy and Wolfenden (2013) suggest that institutional structures and ways of working still position teachers as 'passive enactors of pedagogic strategies' resulting in a misalignment between policy and practice. Teacher educators are often not familiar with the reality of schools (O'Sullivan, 2010), yet very little professional development specifically targets this professional group.

The poor quality of initial teacher education has created a demand for continuous professional development. A number of models of teacher development have become universally accepted:

Occasional workshop training with expert teachers, brings teachers together regionally for training led by experts, sometimes from within the teacher training system, or sometimes as a part of international donor projects with local or international trainers. These can be centrally controlled and training itself can also be uniform, making it easier to measure what has been delivered. This form of training adheres to the standard perception by teachers and education officials of what training should look like.

However, logistically such training can be difficult to arrange, particularly in countries where travelling is difficult and sometimes unsafe. While potentially imparting information and perhaps demonstrating some effective methodologies during the workshop, sustained practice and improvement within the classroom cannot be guaranteed. It may also be difficult to find an adequate number of trainers with the capabilities needed.

Cascade training uses different levels of trainer with an expert trainer (at the top) passing on knowledge to the next level with the intention of a controlled knowledge transfer from one level to the next. The popularity of this method may be partially explained by the fact that there is a wider pool of trainers to draw on, and this means more people can be reached at a smaller cost. 'It is cost effective, it does not require long periods out of service, and it uses existing teaching staff as co-trainers' (Gilpin. 1997:185).

However, it is very difficult to know how much relationship the final training bears to the top layer of training. 'The cascade is more often reduced to a trickle by the time it reaches the classroom teacher, on whom the success of the curricular change depends' Hayes (2000:135).

Intensive overseas immersion takes practitioners from the target country to an overseas host institution for usually one or two months' intensive teacher education, including both theory and practice. Teachers are

immersed in intensive training, given extensive attention and information to improve their own teaching practice and that of colleagues, through cascading on their return to school. The training received is uniform and easily measured in terms of input.

However, this is expensive; individuals are flown to a host country, accommodated and trained and the knowledge gained tends to remain with the individual practitioner and is not necessarily shared with colleagues on their return.

The core disadvantages of these prevailing models of teacher development, can be overcome if training is centred in teachers' own schools or teacher educators' own institutions, and is linked to the curriculum and current practices. Such training is potentially more sustainable and promotes collaborative learning amongst teachers and teacher educators, and is the model which is at the heart of the OU's international teacher development projects, and video is an important component of that model.

Use of video in teacher education

Over recent years digital video use has become more prevalent in teacher education as an important resource for enabling teachers to examine what is happening in a classroom (Sherin 2004; Sherin and van Es 2009; Rich and Calandra 2010; Gaudin and Chalies, 2015). Its use has been shown to lead to heightened motivation, optimised cognition and improved classroom practices, thus enhancing teacher learning (Gaudin and Chalies, 2015).

The development of the use of video has moved from being simply a means of exposing teachers to practices that can be copied, to a tool in the development of teachers' professional judgment. Gaudin and Chalies describe this as a shift from 'normative' modalities (with a focus of what to do in the classroom) to 'developmentalist' ones (the building of knowledge about how to interpret and reflect on classroom teaching). The implication therefore is that video has the potential to support the professional development of both teachers and teacher educators.

Broadly speaking, two main types of classroom video have been developed for teacher professional development. Type 1 features other teachers – practitioners who are generally unknown to the trainee. Usually the product of professional filming and editing, and involving some form of thematic organisation and viewer guidance, these are generally intended to be distributed to a large number of end-users. Type 2 features the teacher themselves. Normally filmed in-house, these serve primarily as prompts for personal reflection and trainer or peer feedback, require intensive face to face mediation and are not intended for wider viewing.

In the early days, video was not designed for any specific country or region, but used as an exemplar of the type of classroom practice that ideally would be adopted across a range of environments and generally filmed using non-local teachers and classrooms. However, we have come to appreciate the power of authentic video that reflects local conditions as a learning tool. Case study 1 describes the challenge of producing authentic video; case study 2 describes how locally produced video has been effectively distributed and mediated in Bangladesh; case study 3 highlights some of the challenges in using video with teachers and case study 4 provides two examples of using Type 2 video material.

Case Study 1: The production of authentic video in India

In Teacher Education through school-based support in India (TESS-India), video clips were produced as part of an extensive bank of OER to support teachers in developing more participatory approaches.

Producing authentic material across a range of subjects and levels proved to be challenging, as the skills and approaches that we were trying to capture, are not in widely in use. Selected schools were given examples of TESS-India classroom resources and teachers were filmed using them. The results were disappointing and it was clear that teachers needed more preparation. A new plan was conceived.

14 teachers (elementary and secondary) and 9 teacher educators (mainly from DIETs) were chosen by state officials in Uttar Pradesh and Madhya Pradesh and invited to a workshop. All the teachers and teacher educators had at least five years of experience of teaching in schools, and most had considerably more. All the teacher educators were involved in developing teachers' subject knowledge, but involvement in other activities such as giving feedback on teaching, supporting planning and demonstrating teaching skills varied considerably.

During the workshop they were introduced to the TESS-India OER (www.tess-india.edu.in) and ten Key Resources which explain the approaches to teaching and learning that the project is promoting. Each teacher was assigned a teacher educator to work with them in school. The teacher educators were given a tablet computer pre-loaded with the TESS-India OER, capable of taking video and photographs, and trained how to use it. Each

pair worked together, intensively for two weeks. The teacher educators visited every day to observe lessons (using the tablet to record parts of the lesson) which the pair discussed afterwards, and to support planning for the next day. At the end of two or three weeks, a professional film crew visited the schools and collected footage. The footage was edited to produce 55 clips, illustrating the ten Key Resources in a range of settings and the academic team added a commentary. All the classroom dialogue is in Hindi, with commentaries in English, Hindi and four other Indian languages.

A few weeks after the footage was complete, members of the academic team visited Uttar Pradesh and had the opportunity to interview the teacher educators about the experience. All provided very positive accounts and were able to give examples of the impact on their practice. At the end of the day, one of the teachers who had been involved arrived at the DIET where the interviews had been taking place. He had come because he was very keen to share his experience. He told us about his teaching career and how he was considered to be an 'expert' teacher. After the workshop and during the training period, he came to realise that he actually had a great deal to learn. *'I thought I was the best teacher in the world and I realised that I was the worst'*. He is very proud of the changes that he has made to his practice.

The films produced are not intended to show 'perfect' lessons. Rather they show real teachers in their own settings, making an effort (with some success) to adopt participatory approaches to learning. This experience highlighted the effort required to obtain authentic video and demonstrated the potential of the process to support professional development.

Case Study 2: Using professionally made video in Bangladesh – EIA

In the English In Action (EIA) project in Bangladesh, the Open University used a professional film crew to film local teachers in their own classes teaching with the national English Language Teaching (ELT) textbook. Through mediating this authentic classroom practice with a video narrator and face-to-face supportive workshops, both of which provide context, deconstruction and encourage reflection, EIA has produced what Power (2014) refers to as a 'peer-supported, mobile enhanced school based' approach to teacher professional development.

Access to the internet cannot be relied on across rural Bangladesh so the project has developed video and audio resources delivered offline on 4 GB, SD cards that teachers can insert into affordable mobile phones. The delivery of mediated video through teachers' own mobile phones offers an immediacy of impact and a degree of flexibility that much conventional training-room based, trainer-led and time-bound input often cannot match (Woodward, Griffiths and Solly, 2014). These videos of classroom practice take teachers into other teachers' classrooms to see models of good practice but in a recognizable and relevant environment (helping them to build a 'vision' of good teaching); the mediation helps teachers to interpret what they see. Hence the programme supported normative and developmentalist modalities (Gaudin and Chalies, 2015).

On the outskirts of Rajshahi in the north west of Bangladesh is an upazilla with 20 primary schools and ten secondary schools involved in the project. M is an English teacher at one of the high schools. He has been teaching for 13 years, seven of them at this school, and has been involved in other teacher professional development initiatives, funded by the Asia Development Bank, and UK-Aid. In both these initiatives, M went on block training courses as the sole teacher from his school and was away from the classroom for extended periods of time. On returning to his school he reported that he had found it difficult to apply the techniques he had learned to his own classroom. He said that they demonstrated techniques, but it was *'only face to face and it didn't stay with us'*.

In EIA the focus is on his classroom. He worked over a 16 month period through a set of materials delivered through his basic Nokia phone, and in print. He also attended regular meetings with other EIA teachers in his upazilla. He stated several times that it was a *'radical transformation'*.

A is a young, relatively inexperienced teacher and during her first teaching appointment was paired with another more experienced EIA teacher. A was very specific in how useful it was for her to be working with a more experienced teacher. The programme encouraged them to meet once a week to discuss and reflect upon what they have been doing in their teaching, and they were provided with teacher journal in which to reflect and report back on their classroom practice. EIA also works with the head teachers and encourages them to develop a learning community within their school, carving out some time for teachers to sit and reflect together.

Both teachers felt that EIA had brought positive changes in their classroom teaching; the students were very aware of these changes and are now much more engaged in learning. A number of the teachers in the project say that their teaching is now far more activity-based and participatory. M described how in the past the students rarely talked or even raised their hands: *'Before I used to lecture the students and they were afraid of me; now they love the classes and speak actively.'*

Despite the success of EIA, teachers do not always focus on the intended elements of the captured film (Woodward, Griffiths & Solly, 2014). Even with mediation, teachers can get distracted by minor details such as classroom layout, pronunciation, and teacher's clothing, and miss the core point of a video clip. Case study 3 demonstrates this further, highlighting the importance of 'selective attention' (noticing) before teachers can use video effectively to develop their professional knowledge (Gaudin and Chiles, 2015).

Case Study 3: Introducing the TESS-India videos to Headteachers and Cluster Co-ordinators

During a one-day workshop in India, a group of headteachers and cluster co-ordinators were introduced to the TESS-India OER, including the videos. One of the TESS-India OER for school leaders, focuses on how to bring about improvements in teaching and learning in a school and the aim of the workshop was to encourage headteachers to take more responsibility for the quality of teaching in their school, and to provide them with tools to support them in this endeavour. During the workshop, they were shown one of the TESS-India videos. After their initial response, the idea was to show it again, asking them to focus on particular aspects and finally to discuss how they could use the resource with teachers.

The video chosen was one which has been used in many workshops because it was felt to be authentic and shows effective teaching and learning. A single teacher has 90 children in a multi-grade class. He organises a range of activities which involve children working in groups and includes some peer-teaching. He makes good use of the text-book and arrange of local resources. The headteachers were not Hindi speakers so they were shown the version of the video in which the commentary was in their own language.

The response to the video took the workshop facilitators completely by surprise. In the first instance the headteachers and cluster co-ordinators were highly critical of the teacher. Classroom management was deemed to be defective, the seating arrangements were criticised and they commented on the lack of a lesson plan. When asked what the teacher could have done to improve, they listed things that were beyond his control (such as the amount of space available) or, in terms of teacher learning, did not seem to us to be important (for example, what he was wearing).

On reflection we realised that they could not see past the conditions in the classroom. The responses of the children, the level of their engagement and enjoyment was an important feature of the clip and a discussion about what he was doing to elicit those sorts of responses could have been very helpful. The headteachers however, were completely focused on the teacher and the physical conditions. No lesson plan was evident in the film, but the evidence from the activities and resources was that it was a very well-planned lesson.

This experience highlights an important component of teacher expertise, namely the ability to identify and interpret classroom events and to make decisions based on those events. The group were not able to interpret the classroom in terms of childrens' learning. This highlights the importance of mediation and professional developments for trainers, particularly when the audience are expecting the video to be very close to the context in which they work.

Case Study 4: Teacher's making their own video in Peru and Ghana

Type 2 video is currently being trialled in Peru as part of the Foreign & Commonwealth Office's Prosperity Fund project being implemented by the OU, and used in Ghana as part of a research project based on OER from the Teacher Education in Sub-Saharan Africa (TESSA) project.

In Peru, trainee English teachers on pre-service courses and in-service teachers in secondary schools are involved in a pilot where they use their own mobile phones together with a small external microphone to film their classes and use the footage for detailed reflection with mentors, supporting them in improving their classroom practice. This work has only recently commenced but initial responses are encouraging. Teachers and trainee teachers are surprised, sometimes pleased, and occasionally alarmed at the practices that the video reveals. *"I didn't realise I spent so much time speaking"* said one experienced teacher. *"Being able to view the video with my mentor has enabled me to reflect on my practice and pinpoint elements that I'm happy with and other areas that I need to work on"*. A trainee teacher highlighted how crucial the mentor/mentee relationship is in supporting this kind of reflective practice. *"I think if I felt threatened by my tutor I would not be so happy in sharing my successes and challenges"*.

The impact of video on developing professional relationships has become evident in a project in Ghana in which the focus is teaching practice supervisors (TPS), rather than the student teachers. In this project (Wolfenden et al., 2015), TPS have been provided with a tablet, pre-loaded with TESSA OER including the 'Teaching Practice

Supervisors Toolkit'. During routine visits to students, TPS have been using the tablet to capture evidence from the classroom – video, audio and photographs – which provides a focus for the post-lesson discussion. Findings so far indicate that there is a greater focus on practice during these discussions, with more formative feedback and a shift away from normally dominant summative judgements. A more democratic and productive relationship has developed between the tutor and the student, benefiting both parties, and TPS are learning how to support students in interpreting classroom events.

Hence, from these examples, it is clear that Type 2 video has the potential to support student teachers, providing the opportunity to analyze and improve their teaching practice, (Rich and Calandra 2010; Rook and McDonald 2012). It also provides professional development opportunities for mentors and teacher educators, and therefore has the potential to make teaching practice a more productive learning experience. It does however require intensive personal support and allocated time for reflection.

Conclusion

The situated nature of teacher learning (Putnam and Borko, 2000) and the model suggested by Shulman and Shulman (2007), suggest that teacher learning should be grounded in practice. It is not simply a matter of teaching general principles and then how to apply these in the classroom; the situated perspective recognises that general principles are 'actually intertwined collections of more specific patterns that hold across a variety of situations' (Putnam and Borko, 2007,p12). While Type 1 video can offer exemplars of classroom practices for teachers, the essential pairing of video with both online and face-to-face mediation cannot be stressed enough if the core benefits of reflective practice are to be realised. Without meaningful mediation, there is a danger that teachers will not be able to unpick the patterns in the practices they are observing and will simply adopt the 'form' of learner centred pedagogy without understanding the 'substance' (Brodie, Lelliott & Davis 2002) - the underlying principles without which the strategies cannot be effectively implemented. Mediation ensures that the use of video can be both normative and developmentalist. Using Type 2 video material requires high levels of trust between mentor and mentee, tutor and student teacher, and the real benefit comes from the discussion and analysis rather than from simply watching the videos. We have shown that if this trust is present, the learning can extend to all parties.

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