Record, reflect, connect: Using web cams with an ePortfolio system

Becky Fenton, Megan Lawton and Emma Purnell
University of Wolverhampton

Abstract

Each country has its own visual sign language used by the Deaf community; in the UK this is British Sign Language (BSL). In 1994 the University of Wolverhampton created the 1st Degree course in Europe for Interpreting (BSL/English) this course has a very high employment record. Before this research students used video cameras to record work, physically having to bring tapes in for tutorials and feedback. This research brought together an ePortfolio system – PebblePad© and web cams to offer students the opportunity to record, reflect and connect their development in their own space and time and for staff to be able to provide relevant and appropriate formative feedback. Within the University of Wolverhampton all students and staff have an ePortfolio system - PebblePad©. The software allows users to build collections of items related to their studies, personal development, continuing professional development or any event. Those items can then be published or shared with individuals, groups or to a public audience. The software promotes reflection and gathering of evidence, any digital file can be linked to the software giving the ability to add such things as video, images and sound. However, the majority of students and staff use mainly text and pictures this research has tested the ability to connect moving images through web cams. This paper will give a comprehensive view of the technical, pedagogic and support issues raised by this project.

1. Background.

The introduction of Personal Development Planning to Higher Education in the UK

In May 2000 the Quality Assurance Agency (QAA) *et al* issued a policy statement on the development of a Progress File for Higher Education. A progress file was to have two elements:

> a transcript recording student achievement which should follow a common format devised by institutions collectively through their representative bodies;
>
> a means by which students can monitor, build and reflect upon their personal development.

All Higher Education Institutions in the UK were invited to endorse and implement this policy. The Policy Statement set out roles and responsibilities for implementation, (point 16 in the Guidelines for HE Progress files) that clearly state that the institutions are responsible for providing opportunities for students to engage with personal development planning (PDP), however the responsibility for gaining benefit from this process would be with the student but that the institutional stance, policies, support and attitudes would influence this. The Guidelines (2001) gave an implementation date for Progress Files as the start of the academic year 2005/6, from this date the QAA could include PDP in their institutional audit.

Within the Guidelines PDP is defined as:

> *"a structured and supported process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development."*

Within the University of Wolverhampton, PDP was strategically placed within the Institutions' Learning and Teaching Strategies 2002-05, 2005-06 and 2006-10. An outcome of this was the development of an institutional framework for the process of PDP which set out that the main outcome

should be a formative student-centred process that provided a product that documented a student's achievement and experience at the university. The PDP processes are integrated throughout the whole of the student experience at the university, they are developmental and used by students with tutor guidance.

ePortfolio.

In 2004/5 the University of Wolverhampton worked with an external company, Pebble Learning, to develop and pilot the software PebblePad©. At the start of the academic year 2005/6 this tool was rolled out across the whole of the University. All staff and students having their own personal accounts, icons for short-cut access to the software became a part of all desktops and could be found in the personal management page of the virtual learning environment, Wolverhampton On-line Learning Framework (WOLF). Over 2005/6 and 2006/7 new communities of users emerged that were early adopters and 'champions' of the new software and an ePortfolio users group was established. In June 2007 a review of PDP at level 1 showed that all academic schools were using PebblePad© in some way to deliver PDP in the first year (undergraduate) curriculum. ePortfolio and PebblePad© at the University are often used as interchangeable terms. For example the URL to access the PebblePad© software is http://www.wlv.ac.uk/eportfolio. PebblePad© is a system designed to support both formal and informal learning, within the University of Wolverhampton it is defined as a 'personal learning space' as opposed to a 'managed learning environment'. The software allows users to build a diverse collection of items related to their studies, personal development, continuing professional development or any event of personal significance. Those items can then be published or shared with specified individuals or groups or to a public audience through the creation of a URL address. The software promotes reflection and gathering of evidence, any digital file can be linked to the software giving the ability to add such things as video, images and sound

2. The Pathfinder Project www.wlv.ac.uk/pathfinder

This Higher Education Academy (HEA) funded project came out of two areas of best practice highlighted in the University's Benchmarking exercise, 1. Innovative use of retreats (two day and one night off campus staff development events) 2. Successful implementation of an ePortfolio tool – PebblePad© to support the process of Personal Development Planning. The aim of the Pathfinder project was to extend the use of electronic personal development planning ePDP. In each academic school ePDP was be embedded in two, core Level 1 modules using Pebble Pad© software. A key aspect of the project was the appropriate design of ePDP tasks in line with the learning outcomes of each module. In addition, there was a staff development aspect in that module leaders and teachers in many Schools became familiar with the uses, issue in, and benefits of, ePDP. The project used 'champions' of ePDP as developmental mentors to support Level 1 tutors in their planning, design, use and assessment of integrated ePDP tasks. Staff development in support of the mentor role and for tutors implementing ePDP was brokered through a series of three away-day retreats following five phases of developmental mentoring. Nine staff acted as ePDP mentors to nineteen module tutors covering 1810 Level 1 students. Modules ranged from groups of 15 to the largest module with 350 registered students.

Throughout the project were the two questions of whether developmental mentoring was culturally desirable and feasible. Those involved in the project were asked to reflect in their ePortfolios and to share their thoughts with all members of the project team. Two of the authors of this paper acted as mentors and one as a module tutor or mentee

For the Pathfinder project the Level 1 module *"Basic Bilingual/Bicultural skills for interpreters part 1*" was chosen to embedd the use of an ePortfolio. The module is designed to develop key skills in both

British Sign Language (BSL) and English as grounding for the rest of the course. On average, approx 70% of the cohort have come from the University's foundation (Level 0) BSL accelerated course, the remaining have studied BSL on external college courses and entered as direct to level 1.

3. British Sign Language (BSL)

Each country has its own visual sign language used by the Deaf community, in the UK this is British Sign Language (BSL). In 1994 the University of Wolverhampton created the 1st Degree course in Europe for Interpreting (BSL/English) this course has very high employment rates. The course requires students to develop their BSL skills and as this is a visual language students are require to record their signing for self, peer and tutor assessment.

BSL has a different grammatical structure to spoken English and consists of different elements such as non-manual features (e.g. eyebrow lifts, mouth shapes and body and facial posture), classifiers or hand shapes, placement. To give the correct meaning and understanding to the language students must be able to use accurate combinations of all the BSL elements in the correct BSL grammatical structure. To develop their production and translation skills students are asked to produce clips of signing from either spoken English or text which can be assessed for clarity and accuracy of meaning. Students need to be able to reflect on their performance and develop action plans for self-improvement. To become a BSL interpreter, students must become comfortable with being watched be others and to having their signing questioned.

4. Issues pre-ePortfolio

BSL teaching has traditionally always relied on video cameras and VHS language labs to copy and use sign language materials in the classroom. VHS is a linear recording method with a lower quality compared to digital, therefore, PebblePad© was suggested as it offered a number of additional benefits as well as better recording facilities. The benefits included a unique way of enabling students to document and evidence their BSL clips using a more robust technology, ease of self, peer and tutor reviewing, reflection along side the moving image and better quality recording, search and copy options. Another crucial aspect was that PebblePad© ethos supported second language acquisition, or in this case: hearing adults learning British Sign Language. Oxford (1990) advocates the use of language diaries to support second language learning, therefore, the e-portfolio system would enable recapping, linking, developing and reflecting on BSL language learning by using web cam clips, all of which was not possible with traditional methods.

5. ePortfolio advantages

The idea of using an ePortfolio to support language development was unique to both the University of Wolverhampton and for the teaching of British Sign Language. Spoken language learning has always used technology however a tool enabled visual language learning had been hard to find. For the first time within the history of BSL teaching, students were not required to meet each other face to face to practice or send their signed VHS assessments in the post but could work remotely. This advantage was particularly important for our BSL students who lived away from the university, had part time jobs or family commitments and couldn't always meet their BSL study group.

Using web cams was eagerly accepted by the 'e-generation' of the cohort as web cams are part of the social networking sites such as MSN chat, facebook, myspace etc, compared to perhaps mature students who did not have this kind of experience. Interestingly to note that previous 'pre e-generation'

cohorts would often physically freeze in front of huge tripod VHS machines regardless of age and were very tentative about having to be filmed.

To introduce IG1100 students to PebblePad©, they were taken away from their usual VHS language lab/classroom to a computer lab and was introduced to PebblePad© software. Having used web cam clips successfully within our own VLE (WOLF) and introducing PebblePad© successfully across a number of subject disciplines, we hadn't foreseen any difficulty of applying it to BSL language learning.

To help students with their reflection the tutor created a scaffolded web folio template (Fig 1) with various tasks and prompts. They were asked to copy the template to their own accounts, personalise it and then share it with their tutor and selected peers.

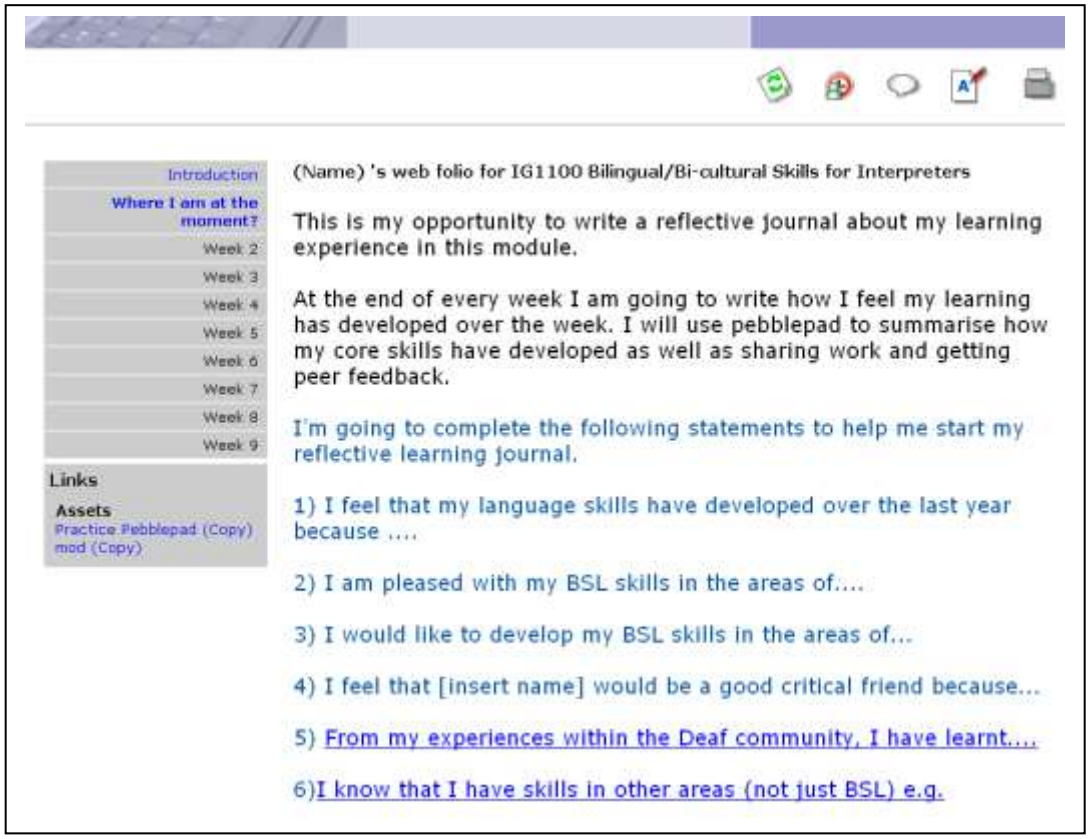

Figure 1. Scaffolded web folio template

The personalised templates were published to a communal space – a gateway – which could be viewed by the tutor but not by other students. Once published the web folio is automatically updated when ever a student makes any amendments.

6. Issues and potential solutions

Students were required to bring their own web cam clips to upload as their first introductory tasks, this was our first initial problem. We had forgotten that PebblePad© had a maximum 10MB file upload. Generally, BSL students' clips are larger than 10MB as their clips were over 30 seconds in length and had often been recorded on the highest quality possible. This was to ensure that hand shapes movement/articulation and facial movements were conveyed clearly, crucial for BSL learning. We subsequently tested differing qualities and found that if students dropped the file size, the quality was compromised which was not acceptable when dealing with a visual language. After consulting various computing academics, we realised that some web cam clips could be reduced in memory slightly by

ensuring that students were wearing plain clothes, had sufficient lighting and recorded themselves against a plain background but the saving was insufficient to hit the 10MB limit or below.

Also within the introductory lesson, students had brought different clips with various file names that were incompatible or unrecognisable to the University's system. There were issues surrounding a new version of the software that were unforeseen and thus disrupted the class.

A major issue was insufficient time within the module to teach the modular content, how to effectively use the software and perhaps the most time consuming, was learning to write reflections. Students often needed PebblePad© support, it was often left to tutors to field technical queries which meant tutors finding out themselves and responding back to students or offering telephone support. Students, when they had managed to upload something such as a piece of English text translation or a very small web cam clip, often required feedback as reflective levels were at such an early stage, that peer feedback or self analysis wasn't helpful. It was impossible to feedback to all thirty-five students and this would also be a contributing factor to disengagement. The nature of the use of an e-based system meant that there was far more opportunities for formative feedback but that this was time consuming and unrecognised by teaching hours.

Discussing the main aforementioned issues with various academics, PebblePad© tutors, and technical support services, a number of possible solutions were offered. The two most popular responses were to 1. have a bigger upload size, one of easiest solutions but not viable as the software only allowed for a 10MB upload and 2. to create video clips in the free social site of YouTube which could then be linked to an ePortfolio. As YouTube is an open site it was not conducive to BSL learning. Unlike spoken language classes where students can voice their language production attempt to a class that doesn't need to see you, BSL requires that all class participants can see you. The students did not feel comfortable with their signing being on such an open site.

Another suggestion was to use smaller clips of signing however BSL students need to show a certain level of fluency requiring at least 2-3 to 3½ minutes of BSL production.

The final suggestion was to lower the video quality, which as previously discussed, would not allow for clear hand shapes, lip pattern, eye gaze etc to have been clearly seen and thus rendering any BSL production incomprehensible.

Having so many complications consequently led to additional barriers that had not been foreseen. Initially, both staff and students were frustrated by the uploading issues especially as students had painstakingly worked on BSL clips to upload to their portfolio. Staff became frustrated as they could see real potential benefits of the system. Inevitably students disengaged and staff were disheartened especially as PebblePad© had been used so successfully across the University. Eventually a number of simple yet successful resolutions were found.

7. Solutions

Staff created a simple set of guidelines for web cam recording (lighting, clothing, background etc) which, meant that every opportunity was taken to reduce the file sizes. Another set of guidelines was created for using Moviemaker which became the standard platform to create web cam files using standard WMV format. The uploading solution was solved by web linking files into PebblePad© from the students' increased personal storage space. Students on interpreting courses now have a larger profile space than any other student in the university which is normally set at 100MB.

Students put themselves into small learning sets to support and offer feedback on each others signing this alleviated some of the pressure for feedback from the member of staff. It also created a better community of learners who were more confident exposing their language skills to their chosen group members

8. Conclusion.

Using web cams with an ePortfolio can be successful if the aforementioned solutions are followed, as well as considering that contact, virtual or face-to-face time is increased to support students in both their use of the software and in writing reflectively. The use of an ePortfolio that builds up over time requires more tutor input as students expect, need and can receive timely, appropriate formative feedback and feedforward. Whilst it is admittedly heavily front loaded for the tutor, when students have developed their reflective and evaluation skills, the benefits can then be seen as they become able to feedback to peers and reflect independently with only some reliance on tutor input.

Since the Pathfinder project, some of our students have set up a closed group on Facebook to send each other web cam clips for feedback during the summer holidays. YouTube has recently allowed selected access only. Whilst both social networking sites are 'closed' and have to be signed up for, it doesn't allow students to singularly select who sees their work, like PebblePad©.

Whilst the Pathfinder project has been an enormous challenge, encouraging other staff to adapt their module to PebblePad© is another vast challenge as it does take time, dedication and creativity, however, the rewards are great. The front ended load is huge on staff time but the potential rewards merit the effort.

References

Dearing, R (1997) *Report of the National Committee of Inquiry into Higher Education*. London: HMSO.

Oxford, R (1990) *Language learning strategies - What every teacher should know*. Heinle & Heinle Publishers

QAA, Quality Assurance Agency for Higher Education (2000) *Policy statement on a progress file for Higher Education* [on-line]. Gloucester, UK: QAA, [Accessed 29th September 2008]. Available at: http://www.qaa.ac.uk/academicinfrastructure/progressfiles/guidelines/policystatement/default.asp

QAA, Quality Assurance Agency for Higher Education (2001) *Guidelines for HE Progress Files* [on-line]. Gloucester, UK: QAA, [Accessed 29th September 2008]. Available at: http://www.qaa.ac.uk/academicinfrastructure/progressfiles/guidelines/progfile2001.asp

University of Wolverhampton: The Institute for Learning Enhancement (ILE) (2006) *Learning and Teaching Strategy 2006 to 2010* [on-line]. Wolverhampton: University of Wolverhampton, [Accessed 29th September 2008]. Available at http://www.wlv.ac.uk/Default.aspx?page=10430