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Editor's Introduction

Welcome to our twelfth issue of *Compass: Journal of Learning and Teaching*. This issue of *Compass* reflects key current issues affecting Higher Education: observation of teaching, e-learning (with particular reference to flipped classrooms) and methodology designed to develop broad student skillsets to enhance employability. The issue also focuses upon ways of meeting the needs of 'non-traditional' students, explores a student champion approach to improving staff-to-student feedback and celebrates an occasion devoted to the creation of mobile phone apps.

In the context of the Teaching Excellence Framework, Martin Compton's opinion piece about the use of observation of teaching in Higher Education weighs up both adverse and favourable methods, drawing on the Further Education experience. The linkage between observation as a part of appraisal and government determination to eliminate poor teaching is not, in his opinion, likely to produce pedagogical improvement, marginalising as it does peer and developmental observation practices. Far from adopting a confrontational stance, however, he explores various studies of observation approaches that are not about grading performance but instead focus upon delivery and impact rather than the person, or involve more than just two participants. The potential benefits to both observed and observers are clear; within a non-judgemental and properly-resourced framework, developmental observation has much to offer HE institutions keen to improve the quality of teaching and learning.

A closely-related paper by Zeynep Kacmaz about the peer observation of teaching, specifically in the less-researched area of e-learning, presents some of the challenges faced in monitoring practice and ensuring high standards in the delivery of online teaching and learning, its virtual nature and the fact that many staff are often home-based and 'associate' both militating against effective observation methods. The thorough examination of a cross-section of UK universities and interviews with academics reveals an inconsistent application of peer observation of e-teaching/learning, at a time when online learning is becoming ever more sophisticated (Virtual Learning Environments are now ubiquitous in Higher Education) and teachers are needing to adapt to very different environments and roles in the context of blended, distance and open learning options. Having painted a fascinating picture of the current situation, the paper concludes that much research still needs to be done and suggests a range of potential macro- and micro-level studies to address the reprofessionalisation of teachers in this area, to achieve promotion of best practice and to improve the quality of teaching.

Several contributors to this issue of ***Compass*** have found themselves much exercised by the realities of institutional Virtual Learning Environments and provide their take on experiences of e-learning and flipped practices:

Adele Atkinson's case study of the application of a flipped classroom to a six-week healthcare professionals' module finds that there are some real benefits to collaborative, enquiry-based/problem-based learning sessions when all participants have, in their own time, adequately explored the available online resources and activities. The case study makes clear the importance both of students' digital skills and of the quality of the materials they are accessing; additionally, the tutors' roles as facilitators and questioners are key to successful face-to-face sessions. Participants' previous passive learning experiences may be a barrier to this much more active approach; in future, she intends to provide students with a preliminary rationale to overcome that and also to develop colleagues' questioning skills to improve the problem-based learning in module sessions.

Another exploration of flipped-classroom methods by Alan Dix involved the reuse of MOOC video materials and the fine-grain analytics provided by a new universal media player. His account of his first steps in flipping the classroom points to the necessity of very diverse ways of using materials to

meet student needs and to the advantages, thanks to the analytics, both of targeted feedback to students and (for the academic, very much accountable) a comforting sense of control over learning. The MOOC materials, intended to be read or watched unsupervised online, proved to be very suitable for student access prior to face-to-face activities, though he does refer to students' own concerns about off-campus internet availability and insufficiently powerful personal computers.

A third piece about flipped learning by Katie Stripe considers the responses garnered from an audience at the University of Greenwich APT2015 Conference to the question 'Is flipped learning a challenge, an opportunity or a necessity?' She suggests that digital and oral expression, as evident in mentimeter and verbal responses to specific questions, reflects a contrast in individuals' preferences for either technological or person-to-person communication in the learning/teaching context; this is emblematic of the institutional gulf between those teachers who resist and those who readily embrace digital technology. Institutions must, she says, have consistency of policy and provide good pedagogical and technological support. The sharing of good practice is fundamental to achieving both general acceptance of, and high standards in, flipped learning.

A fourth paper on this theme by Sue Watling presents some preliminary findings from a three-year action research project into that very matter of staff reluctance to move from face-to-face to e- and blended-learning practices. The project led to the establishment of TELEDA (Teaching and Learning in a Digital Age) course for aspiring e-teachers, itself entirely interactive and collaborative. She argues that e-teaching must be made explicit and that teachers must have the necessary technical and pedagogical knowledge to create effective (i.e. activity-based) online learning environments. Putting TELEDA participants into an experiential course design context resulted in their increased empathy with their own students and increased the likelihood of their consistent adoption of digital practices. Fundamentally, the shift needs to be from a technology-training to a teacher-education model.

Two papers consider the power of particular approaches to learning, both of them at the University of Greenwich:

In the Faculty of Education and Health, Jim Gritton, Jill Stewart, Charlotte Jeavons, Nevin Mehmet, and Vincent La Placa explore how using film to stimulate discussion amongst public health, wellbeing and leadership students has proved efficacious in developing their sensitivity, understanding and powers of empathy, to enhance their future work as professional practitioners. Outlining the approach provides a substantial amount of academic evidence to support the educational and stimulation value of viewing film from health and leadership perspectives and describes the authors' workshop to offer best practice methodology to teaching colleagues. Close focus on the possibilities of one specific film, *Erin Brockovich*, demonstrates how teachers might apply the approach to their own disciplines and offers some clear insights into the issues involved.

Angela Byrne's case study focuses on the introduction of podcasting on an undergraduate History course as a means of learning and assessment. It intended to foster a range of student skills as well as diversifying assessment methods, with both formative peer and summative lecturer feedback. The podcast not only presented students' original research; it enhanced their digital and communication expertise, highly relevant to employability. Student feedback was largely positive. She describes refinements to be incorporated to enhance it for the future.

Helping students (especially those from non-traditional backgrounds and those who are the first in their families to undertake higher education) to access education and find their way into employment presents considerable challenge.

One case study by Noel-Ann Bradshaw describes how the Greenwich Graduate Work Experience Scheme (GWES) enabled a graduate intern with film experience to help combat student apprehensions about the graduate job application process; she selected students, trained them in film-making and got them to use their own ideas in several videos which they created on CVs, extra-curricular activities, mentoring and placements. The case study includes student comments about the skills and confidence acquired during the project and demonstrates how film and film-making represent a decidedly effective way of allowing real insight into the stages of preparing for, seeking and acquiring a relevant graduate post.

Another paper by Melanie Thorley and Clifton Kandler reviews and explores the effectiveness of lecture capturing at the University of Greenwich, specifically its own cross-faculty application of the Panopto system as a means of supporting disabled and non-traditional students who may not be able to access education equally with their peers. The trial threw up significant benefits, as the system operates on personal electronic equipment, allowing for live-streaming, replaying and searching of recorded lectures/presentations and adjustment of fonts and colours. Thus the approach can meet the needs of students with diverse abilities, but there are implications for institutions, which may need to address such matters as staff skills/awareness and legal and policy issues. The paper considers also the system's potential at a time of cuts to student disability allowances for a reduction in the need for in-class notetakers. All in all, the advantages win the day.

Cornelia Boldyreff, Yasmine Arafa, Asif Malik, Andrew Wicks, and Gillian Windall cover the BCS Appathon events at the University of Greenwich, one of several UK locations collectively aiming to engage in one hour as many people as possible in producing a mobile phone app. The authors describe the method, the software and the outcomes. Very much the brainchild of BCSWomen and with creation rather than consumption at its heart, the day not only drew a wide age range of people, but also triggered the idea of exposing first-year students of Computer and Information Sciences to the Appathon experience; as ambassadors, these students might then go out to schools to generate programming interest there.

Twenty-seven student 'champions' at the University of Southampton acted as change agents in a project designed to improve the quality, practice and culture of feedback from staff to students. A thorough portrayal of the multi-faceted, cross-discipline project is provided in a case study by Laurence Georgin, Kristina Stewart, Rebecca Wainwright, Rameesha Anwar and Abisola Tina Hammed shows how a much better understanding of why feedback didn't work well for students was achieved. The paper contains references to some useful transferable resources, such as a video and interactive tool, and clearly describes the various means by which the project's findings were disseminated. Though the case study suggests that embedding good practice will be challenging and will need institutional resolve, there are encouraging signs that, at Southampton, things are moving in the right direction.

We hope that you enjoy reading these thought provoking accounts, discussing the ideas raised with colleagues, and help continue to extend the conversations concerning teaching and learning by submitting to our future issues.

Danielle Tran

Editor

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The role of teaching observations: Developing or managing academic practice?

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> "In four years teaching, you are the first person to observe me. I can't help thinking it might have been better for my students and me if it had happened sooner." Senior Lecturer at a London HEI

> "This patchiness in the student experience within and between institutions cannot continue. There is extraordinary teaching that deserves greater recognition. And there is lamentable teaching that must be driven out of our system." Jo Johnson- Universities Minister - 9th September 2015

Teaching observations are well established in both the school and college sectors and, with the growth of Higher Education (HE) teaching programmes and the Higher Education Academy (HEA) fellowship scheme, they are becoming increasingly common in HE too. Given the talk of using outcomes from teaching observations as part of the Teaching Excellence Framework (TEF) metrics, it is important to understand both the real value of teaching observations and some of the potential pitfalls in their wider implementation.

A useful starting point when engaging in the *teaching observations* debate can be to reflect momentarily on what immediately springs to mind when this phrase is used. There is of course a plethora of models and a matching collection of often beguiling drivers underpinning observation programmes, with varying degrees of opacity. Who is doing the observing? What will they get from it? What will the observed person get? What power dynamics exist between the parties? How experienced or well trained are the observers? What exactly is being observed? Are there criteria against which the observed session is being judged? How does the feedback work? Is it reported or recorded? Our own perceptions and expectations as well as how we conduct ourselves when being observed or carrying out an observation will inevitably be shaped by personal experience.

I spent ten years professionally straddling further education (FE) and HE as a teacher trainer on PGCE and other teacher education programmes. In addition to observations of potential teachers at the recruitment stage and developmental observations on trainees, I also carried out 'quality', graded observations. I calculate that I have conducted more than 500 observations in those ten years. A recent shift to a teacher education role fully within HE, comments such as those in the epigraphs above and ongoing speculation about the likely impact of the TEF have given me cause to examine how my experiences might inform the debate around the role observations could or should play in HE. Observations of teaching in a range of guises have the potential to transform practice at individual and institutional level. There is always a danger, however, that they can become a resented consequence and instrument of marketisation and managerialism which feeds popular narratives of lazy teachers and lecturers only interested in long holidays or enhancing their research profiles.

Learning from “Cinderella’s” experience

Despite Ofsted’s removal of individually graded lesson observations from September 2015 in FE (often referred to as the Cinderella sector), there has *not* been a deluge of institutions removing grading from their own observations. Despite a profusion of developmental observation projects across the sector, its bond to quality assurance will define a typical framework. Usually, all teaching staff are observed once a year, often by a manager and this is then graded against extensive standards drawing on the Common Inspection Framework (CIF) (Ofsted, 2014). Along with concerns about the validity and reliability of management driven and conducted observations, and about the measurability of such subjective concepts as ‘outstanding’ and ‘good’ teaching, there has been a growing discord between the research evidence against grading (see for example O’Leary, 2013) and many institutional policies of not only maintaining grading but also linking grades 3 and 4 (labelled: 'requires improvement' and 'unsatisfactory' respectively) to capability procedures, which can result in dismissal.

Many of the consequences of such systems were apparent in all the institutions I worked in and are reflected in Matt O’Leary’s project report for UCU (2013b): normalisation of and focus on grading at the expense of developmental feedback; cynical compliance with a system leading to formulaic teaching sessions built around a perceived ‘acceptable’ structure; marked divisions between senior management and teaching staff perceptions of the worth and fairness of observations; an undermining and marginalisation of developmental and peer observation projects.

Take any FE policy on observation and I am confident it will be littered with words like 'developmental' and 'supportive'. Wrapping an accountability measure in improvement and support language in this way leads teaching staff to believe they are being misled by a management embarrassed by the system's true nature. Tweaks to observation policies, practices and outcomes become an annual battleground between trades unions and senior management teams. Some FE colleges have even gone so far as to claim they have removed grading, replacing it with a RAG rating system (Red, Amber, Green) or similar value-laden descriptors. It may not be numbers but it is grading all the same.

Jo Johnson’s desire to *recognise the extraordinary* and *drive out the lamentable* suggests judgement mechanisms, not supportive or developmental ones. Within his statement sits a clear echo of discordant perspectives on the purpose of observations between FE leaders and the teaching staff. My fear is that statements such as his and a desire to implement teaching quality metrics might well create conditions wherein grading based on observations of some sort works its way into HE systems. If I put aside the largely developmental observations that are deemed necessarily pass/ fail on teacher training programmes, in any other context I would happily concur with this statement:

> Grading lessons is a piece of lunacy so obviously open to misinterpretation, misunderstanding and abuse that it should be abandoned immediately (Didau, 2014, Online).

In addition to the grading debate there are also questions about the validity and reliability of observations as mechanisms for making such judgements in the first place. Professor

Robert Coe (2013), for example, lists several examples of 'poor proxies' for learning which are often cited as essential elements of an outstanding teaching session such as:

> Students are busy: lots of work is done (especially written work); Students are engaged, interested, motivated [and] Classroom is ordered, calm, under control. (p. xii)

Ho and Kane (2013) address issues of reliability in (school) observations and conclude that multiple observers are the best mechanism for improving reliability, noting that two sets of eyes more than doubles the reliability. Coe (*op cit*.) concludes that we have been measuring only those things that we can skew to show sought impacts have been achieved. Governments may make policy decisions with apparent disregard for educational research evidence but it would constitute a particular kind of folly for HEIs to do the same.

Observations in HE

HEIs have followed divergent paths with regards to observations. Peer observation (often called 'peer review') systems are the most typical but even these can be viewed with suspicion if they are perceived as quality-driven judgement systems (see for example, Shortland, 2004). To say that use and enthusiasm is patchy is something of an understatement and this is likely to be due to suggested or imposed auditing demands, at least in part.

Considering all that I have said about the dangers, should I not be advocating the construction of barricades? In fact, I believe that there is an opportunity here to pre-empt likely, possibly even inevitable, drives to implement or develop observations systems and, above all, to be clear about what we want them to achieve. Particularly with an institutional commitment (and preferably backed up with appropriate resourcing), observations can be transformative and not only for those observed. Aside from the need to build genuinely collaborative relationships and other pre-requisites, peer observation projects in HE have proven successful in developing teaching attitudes and approaches. Bell and Mladenovic (2008), for example, highlight the value of the observation process to the peer observer, weighting its importance above that of the feedback given to the observed party. A study by Hendry *et al.* (2014) similarly concluded that through the process of being the observer, lecturing staff were able to positively change lecture and seminar practices. By definition, the structure of these peer observation projects subverts or reverses the oft-held assumption that the observer has some sort of authority or seniority.

In Shortland's (*op cit.*) case study the participants in a peer observation project "recognized that observation offers a tremendous potential to promote self-knowledge and personal development" (p. 227) despite their university's apparent managerialist agenda and failure to provide promised developmental resources. Hammersley-Fletcher and Orsmond (2004) report on two models of peer observation (a 'trios' model similar to that cited by Shortland above wherein each participant is observed by the other two in the group and a somewhat more formalized approach with experienced and trained peer observers conducting observations). In common with more recent research they conclude that establishing positive interpersonal relationships and providing constructive and developmental feedback are essential, but also suggest that there are benefits in the very process of observation training as well as in its subsequent application.

Frequently cited barriers to success include a lack of clarity in objectives and processes as well as confidence in giving feedback to peers in terms of both the 'what' and 'how'. A 'hybrid' model described by Yiend *et al.* (2014) combines perspectives of both experienced observers and discipline specialist peers. They conclude from their data that:

> the peer review model of teaching observation was only effective in prompting a reflective approach to observation when those participating had an adequate understanding of its meaning and implementation (op cit., pp.480-481).

There are other models that can be used to suit different contexts and needs, some of which are relatively untested in HEIs. One is the Japanese lesson study method which appears to be growing quite significantly in the schools sector. In this process teachers collaborate on planning taught sessions then, as equal stakeholders in the design, deconstruct the efficacy of the implementation. This model extends the already more democratic 'trios' model of multiple observers and further shifts the emphasis away from the teacher to the delivery and its impact.

Success of any model may not be dependent on a commitment to resourcing these projects or subsequent staff development opportunities but this would of course help enable their development and demonstrate institutional commitment. From the point of view of quality assurance and with the TEF in mind, fair resourcing might also encourage lecturers to report (confidentially) on the broad outcomes as a *quid pro quo*.

What is fundamental is an awareness of what drives an observation system and how different modes of organisation can make for very different outcomes. If we make the connection in our own minds between teaching improvement and observations and resist the assumptions that observations are about making judgements, then we have a mindset conducive to creating and valuing observation systems that engage and work. Commitment at institutional level needs to come in the form of adequate resourcing and a willingness to separate the observation process from the system of appraisal. We need to be clear about why and how we go about observations coupled with a recognition of the value of observational expertise to model effective practice or to facilitate training within whatever specific framework or model is embraced. The TEF is still embryonic and there are few in the sector that have no concerns about its ramifications, but it may well prove to be a real opportunity for establishing genuinely effective and developmental observation systems. What is certain is that if we sit back and wait to see what happens we might be worrying more about our own grades than the ones we are giving our students.

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Flipping the Debate – A reflection on whether flipped learning is a challenge, an opportunity or a necessity

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APT2015 ‘Flipping the Institution: Higher Education in the post Digital Age’ focused on exploring the challenges and opportunities created by the rapid changes in technology and their potential effects in higher education. ‘Is flipped learning a challenge, an opportunity or a necessity?’ (Stripe and Carrier, 2015) presented the idea that flipped learning is anything that challenges the traditional teacher led model of classroom teaching, especially by introducing technology (FLIP LEARNING, 2016). The idea was, to use a flipped learning format (i.e. one that transcends the traditional), to present information and collect thoughts from the audience, primarily teachers of higher education, about the future of flipped learning. The session, a mix of information delivery and discussion, involved the use of mentimeter (Mentimeter, 2016) – an online tool that allows, via smart phones, voting and commenting during a presentation. The intention was to highlight the challenges and opportunities of flipped classrooms by using some of the techniques for flipping learning mentioned in the presentation, to collect opinions from the audience. I would like to look into some of those responses and reflect on what they mean for post-digital education. In addition, the interactions that came from the use of the technology also interested me, as they highlighted a disparity between verbal and online communication; this disparity I think needs to be considered as we move further into the technological realm.

Data collection and classroom dynamics

One aim was to gauge audience opinion about flipped learning and the future of technology in higher education. Using Mentimeter provided a good, if unintended, view of how verbal and online communications coexist. Figure 1 shows that flipped learning was considered a fad by five audience members; however, further discussion highlighted that this was not, in every case, owing to a feeling that learning technology is going to die out, but rather that terminology is likely to change and evolve with the technology. Adding an online component into the discussion highlighted the way group dynamics change, or don’t, in relation to the type of communication. There was a noticeable time lag between the start of small group discussions and the moment when digital comments began appearing on the board suggesting participant nervousness about being first to contribute publicly via an instant feedback system, much as you may expect with a classroom discussion. However, once the initial barrier was overcome, there was a constant stream of comments. This combination of online and verbal methods, a cornerstone of flipped learning,

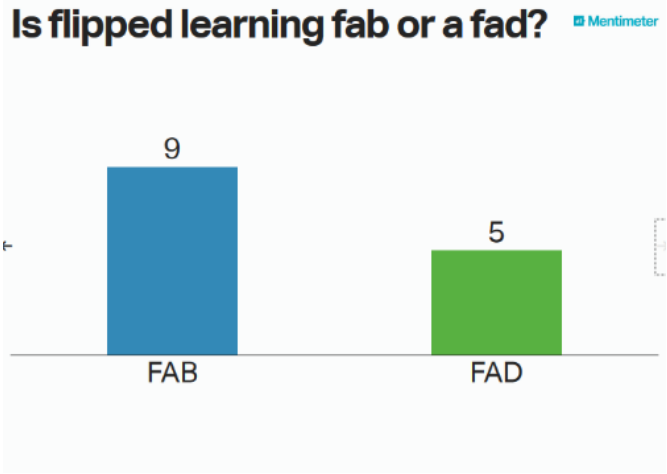

Figure 1: Data collected in answer to: 'Is flipped learning fab or a fad'

does seem to demonstrate a distinction between participants' preferred modes of communication: some communicate more comfortably in verbal discussion; others prefer to embrace technology to express themselves. Both semantics and dynamics highlight one of the major, and perhaps less obvious, challenges in developing flipped learning. The language we use to describe technology and the communication techniques we use to 'flip' classrooms need careful consideration. Failure to do so may exacerbate challenges (Johnson *et al*, 2015) and insecurities that already exist when technology is deployed as an educational tool.

With hindsight, I should have asked the initial questions that started the session again at the end of the session to capture any changes of opinion brought about in light of the information presented and the resulting discussions. However, noting a change in opinion as a number on a graph would not have given the information gained from the discussion. One respondent who initially answered '*fab*' changed their mind after hearing statistics about current usage of technology and its evolution in education during the presentation. I am not sure I agree that flipped learning is a fad. The statistics are based upon available technologies which, as with the vocabulary, will evolve or die out, but the concept of flipped learning will continue to develop. The technology may change and we may call our flipped classrooms by different names but I think the challenges to the status quo of accepted pedagogical styles from new technology will continue to cause change and development in education. This is the 'necessity' of flipped learning: as society becomes more dependent on technology than ever before, education must follow suit. However, the interactions described here show that without the combination of both online and verbal communication something important can be lost so when introducing an online aspect to education a balance must be struck between the two.

Online tools can be used to collect massive amounts of data but one sentence can also have an impact. For example, "*we could do that on flip chart paper*" or "*that looks cool but I don't know how to do it*". To me, these comments from the audience are opposite sides of the same coin: One attitude - Why use tech? The other - I can't use tech! Addressing this requires taking a step away from the language and techniques surrounding flipped learning and taking a step towards supporting it. I should like to see that done by demonstration and the sharing of good practice across institutions to move flipped learning from a hypothetical concept to something which is being done to a high standard and actively supported.

Words in the cloud

Supporting and encouraging development of technology enhanced learning requires discussion between educators, managers and learning technologists. The second part of the presentation attempted to start such a discussion and collect comments from small groups and use them to stimulate and encourage conversation across the whole audience. The process had a hesitant start, but some good comments were made.

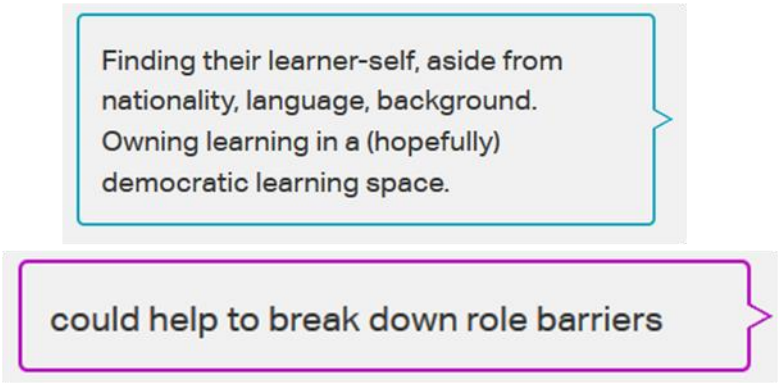

Figure 2: Answers to “What opportunities does flipped learning offer to students and educators?”

The audience responses in Figure 2 suggest opportunities that may be outside the accepted pedagogical benefits of flipped learning (FLIP LEARNING, 2016). Changing the status quo causes inevitable changes to people’s roles in learning scenarios, but I had never really thought of existing roles as barriers, considering them to be just a normal feature of the education system of which I have always been a part. However, in changing those roles, students and educators need to evaluate their own knowledge base and how they share and absorb that knowledge, much in the same way as the language and communication evolves. It follows that ownership of learning will be a beneficial by-product of these role re-evaluations. By challenging roles, students become more aware of their own learning and I hope that this process will make learners more engaged, more active and ultimately more successful.

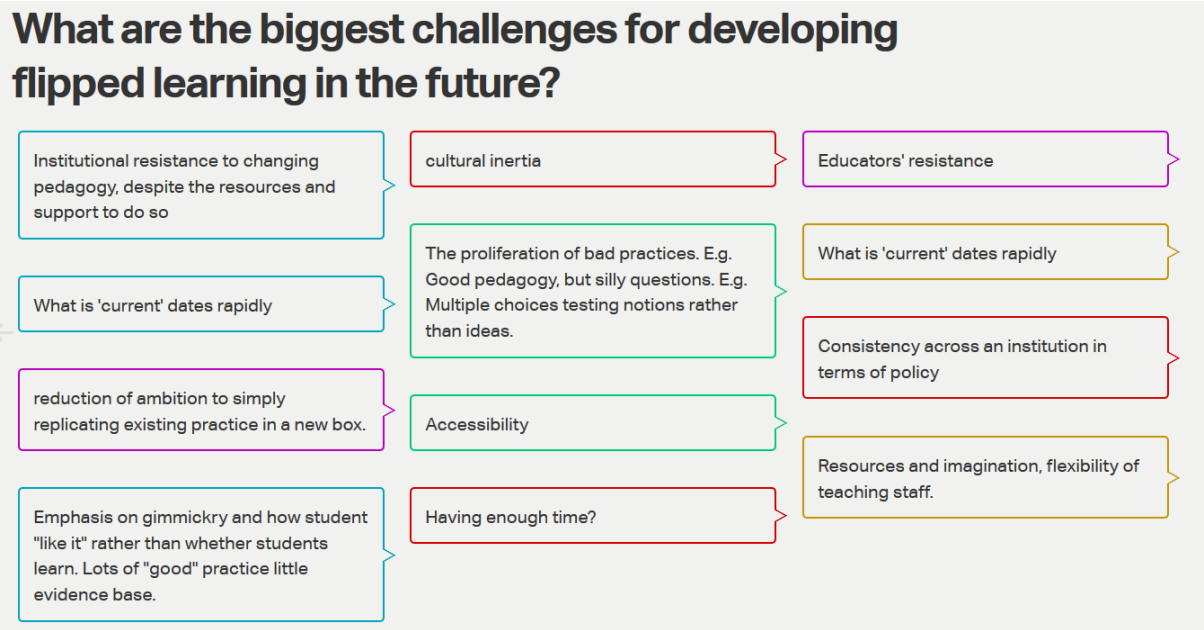

Figure 3: Responses to: "What are the biggest challenges for developing flipped learning in the future?"

Responses to the question in Figure 3 may be split into two distinct areas; challenges personal to the educators and wider institutional challenges. It is my general belief that those personal challenges of "*educator resistance*" and "*having enough time*" could be addressed by working on some of the institutional challenges. Flipped learning will develop through the imagination of the engaged few, but to make it widespread and 'normal' I think that there needs to be much more institutional involvement. The comments I should like to draw on are "*consistency across an institution in terms of policy*" and "*the proliferation of bad practices*". I hope a sensible implementation of the first, with good pedagogical and technological support, combined with well-structured communication strategies, would much reduce bad practice. Professional educators are exactly that: professional. However, institutions cannot expect them to imagine, implement and manage new concepts alone and for the results to be of a consistently high quality (VISUALISTAN, 2016). Nevertheless, I don't believe that a top-down management approach to learning technologies is the best way to go, or that there is a simple solution. This is a process that is going to take time to evolve and requires co-operation between grass-roots educators and their institutions. Management support for classroom-level innovation and encouragement of shared good practice should encourage more educators to take up the challenge and establish a set of policies that take into account the needs of students and educators by a dynamic process of experimentation and negotiation with policy makers.

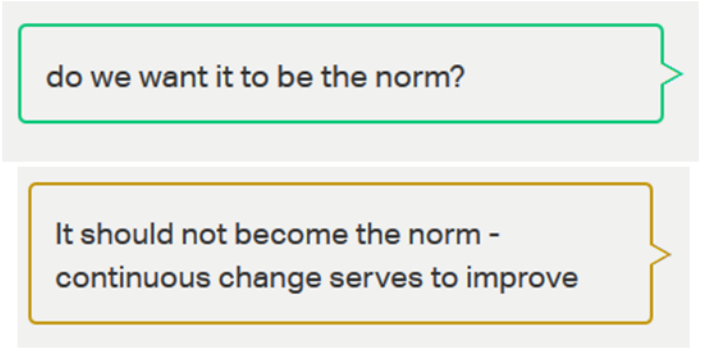

Figure 4: Answers to: "What needs to change in order for flipped learning to become the norm?"

The final question raised many good comments, most of which fed directly from the previous discussion on institutional change, but the two comments in Figure 4 are the ones I should like to finish on. To the first comment, I should like to give my own personal answer: Yes! I want my vision of flipped learning to become the norm (Of course, that is what every megalomaniac wants!), but I should like to quantify that by responding to the second point, which, despite the obvious contradiction, I also agree with. I believe things need to change (and, to some extent, that change will be forced upon higher education), but I don't see that change as a simple shift from one paradigm to another. As we introduce technology into our classrooms and lecture halls, we shall see changes in communication and language and in the way we interact with other people; these all need to become part of a constantly-evolving pedagogical mindset that is adaptable enough to accept the new technologies and evolve with them.

When I was a university student ten years ago, I did not have my own computer, much less an internet-enabled device that went everywhere with me. The rate of change in technology has gone up exponentially and higher education can't just watch: it needs to find a way of

reacting to that change and evolving with it. The title of the presentation was 'Is flipped learning an opportunity, challenge or necessity?' It was, and still is, my belief that flipped learning is all three.

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More than one way to flip a class: learning analytic for mixed models of learning

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Abstract

This case study presents personal experiences in the reuse of materials, originally prepared for a small-scale MOOC, in face-to-face flipped-classroom and blended learning teaching. While some of the literature on the flipped classroom suggests a quite uniform pedagogic style for each class, albeit differing between advocates, the experience of the author was far more pedagogically diverse, depending on the type of material and workload of the students. Fine-grain learning analytics were also critical; these both allowed targeted feedback (enhancing student learning) and gave a sense of control (enhancing academic motivation and well-being).

Keywords: learning analytics, flipped classroom, video, MOOC, learning-resource reuse

Introduction

The flipped classroom is at the confluence of multiple digital technologies. These include technologies for: (i) the creation and sharing of reusable and, possibly, open educational resources; (ii) the delivery and consumption of those resources on multiple platforms, possibly adapted for or augmented by learners; (iii) the monitoring and analysis of usage, progress and achievement. However, unlike online learning, the flipped classroom is set within a matrix of face-to-face contact and personal engagement.

There is a level of continuity and discontinuity in these technologies.

Those who have been involved in education for some years will be aware of research including intelligent teaching systems almost as old as computers; lecture augmentation and video capture in Classroom2000/eClass since the early 1990s (Abowd, 1999) and m-learning almost as far back. Crucially, the ubiquity and low cost of web delivery led to a high-level institutional push towards digital delivery from the mid- to late-1990s, sadly driven less by pedagogic goals than by financial considerations – though the latter were usually misguided.

So, while the term ‘flipped classroom’ is new, both the underlying idea and much of the supporting technology are very familiar.

However, there clearly is a difference in the last few years, both in terms of fully-online learning, notably the MOOC revolution, and flipped-classroom practice. This is due in part to the speed and availability of video editing and web delivery (the YouTube effect), in part to the ubiquity of devices able to deliver online resources and in part to the changing expectations and skills of students being brought up with social media (UCL, 2008).

In order to study these changing styles of learning, the author delivered a small MOOC in 2013 and then reused the video materials as part of flipped teaching at his university in late 2014 and early 2015. The latter also enabled him to try for himself a new universal media

player developed by Talis, which enables a more consistent user experience and provides detailed usage analytics - 'micro level' in Buckingham Shum's (2012) terms.

The next section outlines some of the background to this work and, in particular, some details of the MOOC materials. It then looks at the outcomes, particularly the diversity of styles of use of the material in flipped-class (and related) styles of teaching and the importance of fine-grained learning analytics in supporting pedagogy and offering a sense of academic control.

Context: from textbook to MOOC to flipped class

The author was involved in the management of one of the early post-graduate courses in technology-enhanced learning (MSc in Technology for Learning, Staffordshire University, 1996). He is also an author of one of the main international textbooks in Human Computer Interaction (Dix *et al*, 2004). This textbook provides substantial additional online and tutor materials, including PowerPoint slides, mini-case studies, exercises with sample answers and multiple-choice questions; that is material primarily for reuse by other tutors.

However, despite this theoretical knowledge and practical experience in provision of materials for wide-spread learning, he had not, until recently, been personally involved in the actual delivery of distance learning, rich blended learning, nor, critically, flipped-classroom teaching.

In 2013, a small-scale MOOC was prepared and delivered, which covered partly material in the HCI textbook and partly new material. One of the reasons for doing this was to gain experience with the pedagogic and technical challenges of MOOC production and, in particular, the creation of video material that could potentially be reused by others in their own teaching.

The MOOC material was dominated by video - nearly thirty hours, corresponding roughly to the amount of lecture time in a typical one-semester course. This was broken into ten units, each equivalent to about one week of a face-to-face course. However, only the first six out of the ten units were actually used in the MOOC, as it became rapidly evident that there was far too much material. In fact, the majority of the students focused on the first two units only, but kept revisiting them for the entire nominal length of the course. The first of these was simply the course introduction and motivation, so effectively the students focused primarily on what corresponded to one week's worth of the material.

In retrospect, it would have been better to have made these three to four hours of video material the entire course, as this was clearly sufficient to fill the intended course duration. This corresponds closely to the volume of material described in the production of FutureLearn MOOCs. Glasgow University's detailed report covers the production and delivery of their first two FutureLearn MOOCs (Kerr *et al*, 2015); the total video time was only about two to three hours in each of these MOOCs, albeit split into many small two- to three-minute segments.

This highlights a real tension in the delivery of distance material. Older distance-learning models, notably the Open University television programmes produced in the 1970s, were of substantial length; however, the most successful recent MOOCs use not only much shorter segments, but far less total time. Of course, the Glasgow University FutureLearn material

described above included extensive textual materials, but then so also did the 1970s OU courses; and, of course, face-to-face students are expected to read textbooks as well as attend lectures.

It is important to challenge the common myth of lecture as 'content delivery', which ignores other aspects of the face-to-face experience such as motivation, mutual support and feedback. However, this does not mean that content is not important and a traditional lecture typically reinforces verbally and in slightly different ways the same material that is found in text.

Clearly, the purposes and contexts of students joining a MOOC are not the same as students on more traditional courses, but the massive difference in content quantity raises questions as one moves towards flipped-classroom models.

Why flip? Research and development and pedagogic drivers

Teachers are driven to adopt the flipped classroom for many different reasons, some individual, some institutional. Rather like the MOOC experience above, the author's first steps in the flipped classroom were as much a research and development (R&D) agenda about understanding the issues around flipping, as they were pedagogic.

There were two sides to the R&D agenda.

The first goal was to leverage the availability of the materials produced for the MOOC, described above. As noted, one of the aims in producing the MOOC material was to create reusable resources. Indeed, the material has already been reused to create several courses on the Interaction Design Foundation open education platform (IDF, 2015); it has also been taken up by other educators. By using the materials for his own teaching at University of Birmingham, the author hoped to understand better the advantages and limitations.

Potential advantages are clear. Material created for MOOCs is intended to be read or watched online in a relatively unsupervised distance mode; this has obvious potential for student access prior to face-to-face learning in flipped mode. Also the costs of MOOC production are high, with estimates ranging from fifty thousand dollars to over a quarter of a million dollars per course (Hollands and Tirthali, 2014; DeJong, 2013) with video production between $2,500 and $10,000 per minute (Hollands and Tirthali, 2014b; Fox, 2010); reuse in face-to-face learning could help amortize this cost and increase the sustainability of MOOCs (Dix, 2015b).

Another R&D goal was to get experience of using a universal content player being piloted as part of a Talis project, 'Lighthouse'. Talis develops teaching and learning software primarily targeted at higher education. Currently, the Talis reading list and digital content management software are used by eighty-six institutions worldwide, including over half of UK universities.

The Lighthouse player allows video, audio, PDFs, slides and other text and graphic materials to be viewed with, as far as is possible, a uniform user experience (see Figure 1). In addition, the mobile app versions of the player allow students, while connected to a WiFi network, to download videos which can then be viewed offline. Finally, the player includes detailed logging, allowing fine-grained learning analytics. The author is a researcher at Talis

as well as an academic and the flipped-classroom teaching offered an opportunity to pilot these new features in a real setting.

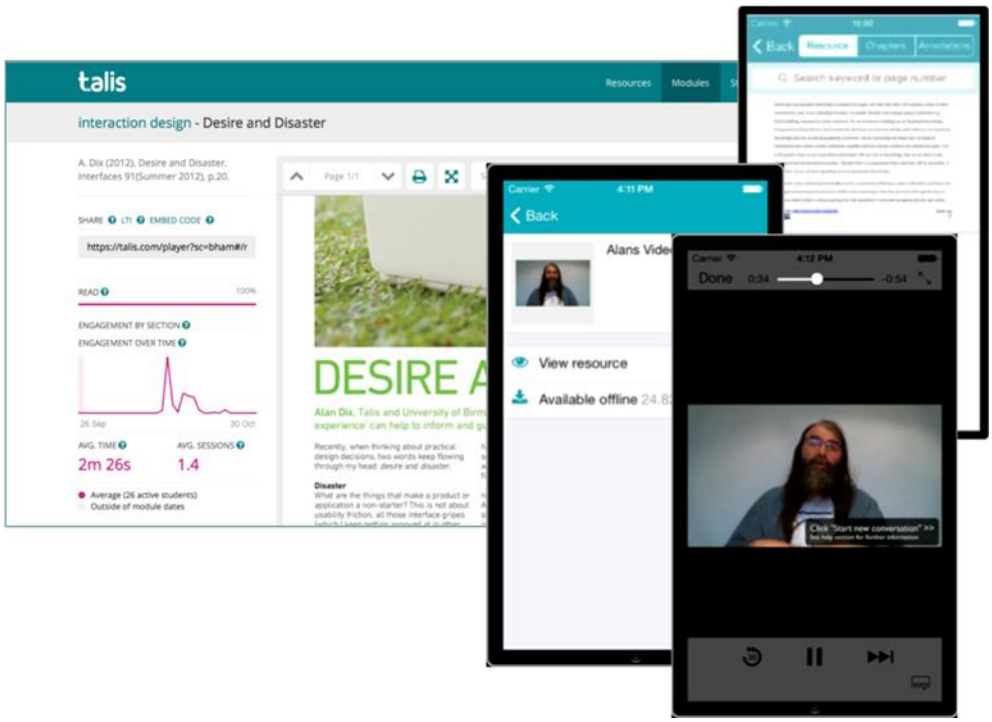

Figure 1: Talis Lighthouse pilot – web and mobile players

There are, of course, many pedagogic reasons for choosing to use flipped-classroom teaching, including better use of face-to-face time, greater student autonomy and more flexible learning - see reviews by Estes *et al* (2014) and Hamdan *et al* (2013). However, there are also drawbacks.

Academic time is always scarce and, whilst most academics are used to standing up and delivering a lecture, pre-preparing material takes considerably more time. In particular, while delivering a face-to-face lecture, the teacher can see whether students are understanding and either re-iterate points or adapt pace accordingly. In contrast, when preparing materials for online use, the teacher has to pre-empt perceived potential problems, but may, in the process, risk labouring points that students actually grasp quickly.

This was certainly very evident in preparation of the MOOC videos. While these were very simple, lecture-like head and shoulders over slides, the level of preparation before videoing was considerable. When these were reused for the flipped class, navigating the VLE to add all the materials proved to be time-consuming. The VLE in question, Canvas, was, if anything, easier than other VLEs the author has used at different institutions, but still tedious when adding large volumes of material.

There are also problems of student access. At the APT 2015 Conference, where this work was first presented, a group of drama students prepared a series of sketches, based on interviews with other students, concerning issues of flipped-class and blended learning. While the advantages of flipping were presented, nearly every sketch included access

issues, such as: (i) lack of access to internet when off campus; (ii) insufficiently powerful student computers and (iii) domestic problems (as viewing videos on a phone was not perceived by other family members as real studying). Given that adequate access to the internet in some areas of the country is still only around 50%, delivering materials online instantly excludes, to some extent, many socially-, geographically- or physically-marginalised groups.

The above students were from the University of Greenwich, which has a high level of participation of 'under-represented' groups, according to the UK Higher Education Statistics Agency (HESA, 2015). In contrast, University of Birmingham scores disappointingly low in indices of widening participation (82% compared to Greenwich's 94%) and so these access issues were less likely to affect the students in this case study.

Finally, the idea of flipped-class teaching can be little short of terrifying for the academic. Whenever students are asked to study outside class there is a loss of control – will they actually read or watch the suggested material?

Delivery: many modes of flipping

The MOOC material was used as part of a module ('Advanced Human Computer Interaction') which included a combination of final-year undergraduate students and masters students. We did not teach the entire course using this method, partly because it was new and partly because the overlap in topics between the MOOC and face-to-face module was limited.

One of the main lessons was about diversity (hence this case study's title). Some of the literature on the flipped classroom (e.g. Schell, 2012) suggests a quite uniform pedagogic style for each class, albeit differing between advocates. However, the experience of the author was far more mixed, depending on the type of material and the workload of the students.

In fact, each use had its own unique character, but they seemed to fall into three main classes:

- ***basics + integration*** – Although this was an Advanced Human Computer Interaction (HCI) course, the fact that the student group was mixed meant that the participants differed considerably in their level of 'basic' HCI. Preparatory videos were thus used for more basic material and students were told to watch the overview video and then to use their discretion regarding the others. The ensuing lecture then focused more upon integrative concepts. Effectively this constitutes use of the preparatory material as remedial instruction.

- ***fully flipped*** – Some classes followed a more standard flipped mode, with video and textual materials before class preceding more discursive in-class material. In one class comprising purely masters students, group discussions seemed far more productive, probably because of both class size and student maturity.

- ***reinforcement*** – In some sessions, all material was available on video, but it repeated the in-class teaching. This, in some ways, resembled lecture capture, except that, thanks to the knowledge that everything was available on video, the

otherwise traditional lecture could be more easily paced and interactive, since the students would be able, from the online material, to fill in gaps.

In the last of these, there was, perhaps unsurprisingly, noticeable attendance fall-off, particularly from the 'back of the class', when students were told in advance that videos covered the same material as in the lecture. Crucially, there was no corresponding hike in the watching of the videos that corresponded to the in-class teaching until the exam period. It appears that weaker or less-motivated students decided that they need not attend the lecture as they could always catch up online later, but did not do so until exam panic set in. This is precisely the reason why some academics have resisted giving to students notes or lecture-capture technology.

This last point emphasises the potential anxiety experience of many academics when considering variations of the flipped classroom. Although, in principle, there are potential pedagogic advantages in offering more student autonomy, this significantly reduces the academic's sense of control over learning. This comes at a time when academics are often facing increased accountability. In the UK, the raising of student fees has paradoxically led to the adoption, by a minority of students, of a more passive, "I've paid, so teach me", attitude to learning (The Guardian, 2015), whilst, at the same time, the UK Government is proposing a 'Teaching Excellence Framework', to assess more closely university-level teaching (UK Government, 2015). As well as other educational benefits, learning analytics offer one way of retaining some element of control during flipped-class teaching.

Analytics: managing panic and developing pedagogy

Learning analytics are often associated with more high-level management of institutions, where multiple data sources, including test scores, attendance and even library usage, can be collated. However, recent years have seen an additional focus on the use of learning analytics to aid the individual learner and teacher. The Purdue traffic lights system is perhaps the most well-known of these, using a variety of raw data sources to provide students with a simple student dashboard, allowing them to see how well they are doing and suggesting remedial action if they are falling behind (Arnold, 2010). Indeed, Long and Siemens (2011) distinguish between the two kinds of analytics, calling the institutional level 'academic analytics' and reserving 'learning analytics' for department-level or course interventions.

Often the finest level of analytics provided by VLEs are click-through counts, providing the information that a student has viewed a page, opened a video, or downloaded a PDF. However, finer-level information can reveal more: for example, Hibbert (2014) describes how the 'play-through rate' (the average proportion of a video that has been watched) provided by Kaltura can be used to assess whether videos are sufficiently compelling. Currently, few platforms offer this level of detailed analytics: YouTube and Vimeo offer very rich analytics, but all at the level of the whole video; Panopto does allow drilling through to video-frame analytics, but like Kaltura, only for video material.

The Talis Lighthouse player provides fine analytics for each type of media, showing not just what has been viewed, but the parts that have been viewed, and this is available for videos, audio or paged content such as PDFs or slides. The most common pattern is a drop-off where students stop watching or reading at a certain point, but it is instructive to know

whether a 50% level of viewing corresponds to everyone watching half, or half watching it all and the rest dropping off after the first minute or so. However, it is also possible to see, for example, where a portion of video has been watched multiple times, or where long dwell time on a certain page of a document suggests that there is some difficulty.

The analytics are immediately available to the tutor when viewing the resource on the player. This can be seen in Figure 2; this is the tutor's view and the basic analytics are visible on the left-hand side of the page. This availability proved to be remarkably effective, even for simple click-through statistics. While VLEs do provide this kind of information, the author had never previously taken the effort to find it; the 'in your face' nature of the analytics (either visible or with a single button), meant that they were viewed and proved surprisingly compelling to watch. Elsewhere, the author has discussed more broadly the way different analytics should fit within different timescales of academic activity and, in particular, the way detection or notification that action is necessary should synchronise with the availability of resources and time for action to occur (Dix and Leavesley, 2015).

These analytics had direct pedagogic benefit, sometimes allowing the author gently to cajole the students ("I know that only half of you have looked at this"), but also to offer more direct guidance. In one case, it was clear that the students were reading only the beginning of a long research paper (see Figure 2); the author was able to advise them that even if they skipped most of the paper, the last section was particularly valuable as it showed the theoretical techniques being applied in practice.

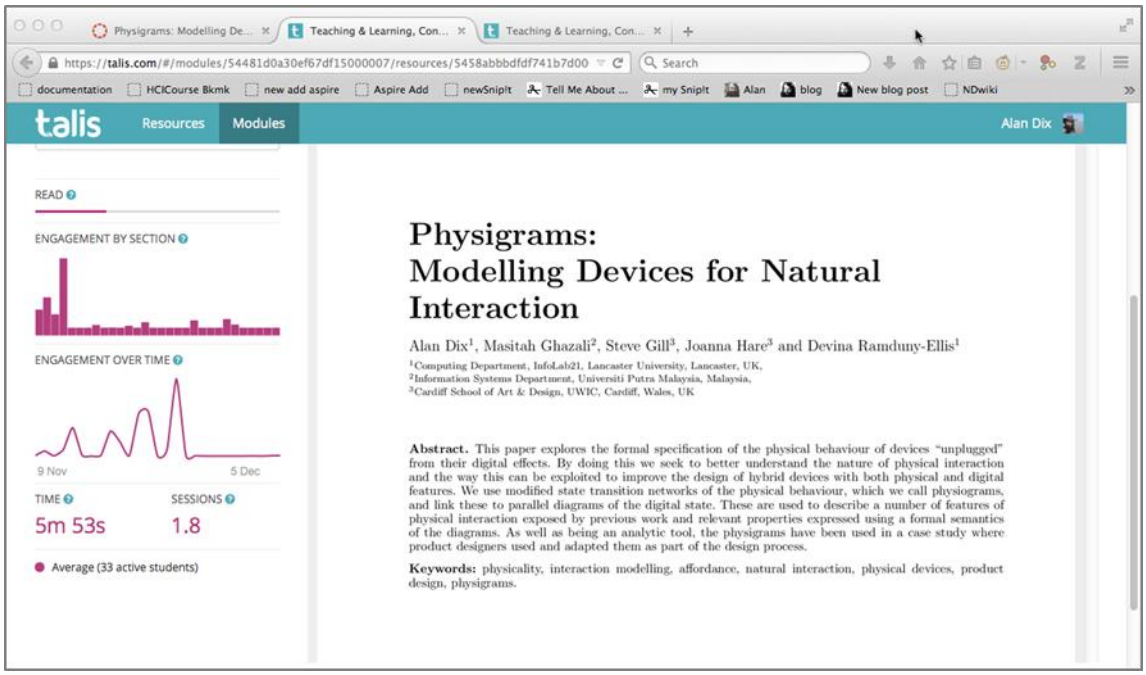

Figure 2: Analytics on PDF document. The 'heat map' at the top left shows which portions of the document have been read.

However, perhaps the most powerful use of the analytics was simply to give the academic a sense of control. As noted, one of the problems of any sort of recommended out-of-class activity is a loss of control for the academic. This is an inevitable consequence of increased student autonomy; however, as previously discussed, this is also coupled with ever-growing external and internal quality regimes and metrics (not least institutional-level analytics) that

put increased responsibility on the academic to ensure student performance. This combination of increased responsibility and reduced control is a recipe for stress. While the fine-grained analytics do not allow the academic to force students to engage with resources, there is a quite surprising sense of control from being at least able to monitor that engagement.

Conclusions

This is only a small-scale case study, but does reveal that, even in a single course, there is a wide diversity of possible ways to use materials in variations of flipped-classroom or blended learning. The author's lack of experience in using flipped-classroom methods may account for this, but it feels self-evident that the balance of use of pre-class, in-class and post-class materials will vary, depending on the type of material and workload of the students.

The fine-grain learning analytics, which were available from Talis Player, were critical, allowing targeted feedback and offering a sense of control. While the former is of clear pedagogic value. it is perhaps the latter, control, which is most significant in terms of academic motivation and well-being, a pre-condition to technology adoption and sustainability. As noted, few platforms currently offer this level of analytics and, to the author's knowledge, no others across different media, but it seems likely that given the clear benefits, this will become an essential feature in the near future.

Acknowledgements

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Creating videos to assist students' understanding of the graduate recruitment process

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Abstract

This case study describes how a Greenwich Seed Fund project, using a kit comprising several video cameras, has helped to combat student apprehensions regarding many aspects of the graduate job application process.

Introduction

The use of video within HE teaching is well-known and well-documented. Advocates say that videos increase student motivation and aid the development of learner autonomy (Wilmot *et al*, 2012). The trend towards flipping the classroom in recent years has resulted in greater use of video and, consequently, it is a medium that students are familiar with.

There is evidence to suggest that there is a connection between memory retrieval and visual cues (Shepard and Cooper, 1982; Mayer and Gallini, 1990). For students who need to learn a new process or technique, video allows them to learn actively by pausing, rewinding and replaying parts of the recording (Galbraith, 2004), so that they can understand the material at their own pace. In cases where students are actively involved in creating the videos, this further helps the material to stick in their minds, as well as providing them with transferable skills such as research, team working, problem solving and technological and organisational skills (Hakkarainen, 2009).

Many universities have supplemented their careers provision with online videos that students, and indeed staff, can watch when they want to (Greenbank, 2012). This enables the advisory capacity of the careers service to be accessible twenty-four hours per day. Another example is from Leeds Metropolitan University, where staff have used video case studies of entrepreneurial role models within a curriculum-based module (Robertson, 2003).

Given that students of this generation have been brought up with instant answers through internet-available media such as YouTube and Facebook, it is no wonder that some companies are also using video to communicate with them. Shaw (2008) describes how MacDonald's uses videos in its staff development programmes to underpin the key aspects of its graduate training.

Motivation

Many students at the University of Greenwich are first generation participants in HE (Barnes, 2012). Parents and relatives of students from these backgrounds often have clerical rather than managerial positions and, as a result, the students to do not have the support and professional networks that graduates from other backgrounds take for granted (Roberts and Holton, 2015).

Coupled with this is the fact that, within the topic of employability, students are apt to be passive rather than active learners. They like to be told what to do and how to behave, but do not always realise that they have not fully understood the significance of what has been said. For example, it is hard to describe a graduate job interview or a networking event in a way that enables these students to visualise it, understand how to prepare for it or appreciate the importance of a practice session in advance of it.

These students are also less able to articulate their concerns. Bradshaw *et al* (2015) describe organising mock interviews run for students by a recruitment company in the financial sector, when some students failed to attend because of their fears about what to expect. As a result, it was felt that showing students first-hand what an interview entails would help alleviate their worries and help them to realise why they needed to prepare.

Project

Greenwich Connect is the name given to the University of Greenwich's vision for learning innovation (University of Greenwich, 2014). Endorsed in 2013, the strategy is designed to recognise and promote a variety of technology-enhanced curriculum innovations. These support all aspects of learning and teaching, with an emphasis on social interaction (in and out of the classroom), digital literacy and collaborative learning. In order to help staff to experiment with some of these new technologies, a seed fund was set up to enable the borrowing of digital equipment that departments could not themselves afford to buy, for use in teaching and learning environments. Various kits are available, such as iPads, video cameras and podcasting equipment.

A successful application for a Greenwich Connect seed fund kit enabled several video cameras to be borrowed. However, though the initial idea was to ask students to create videos on employability topics that they considered interesting, very few of them suggested project ideas and lack of time militated against staff motivation strategies.

Fortunately, the Greenwich Graduate Work Experience Scheme (GWES) in 2015 made it possible for the project to take on a graduate intern with film experience to lead this work. She contacted several students, took up their ideas and trained them to take a role in the actual filming. She was also invited to some employability workshops, run by staff and graduates, which led to the creation of a number of short, stand-alone videos on topics such as CVs, extra-curricular activities, mentoring and placements.

These videos were augmented by others featuring staff demonstrations of good, and not so good, ways to answer competency-based interview questions and to deliver presentations. There were filmed by a member of the Greenwich Connect team. Some of these have been made available on YouTube, whereas others may be accessed only by students, via the University VLE.

Student Feedback

Several students were involved in the actual filming of the videos. They were from various disciplines, including architecture and film. The architecture students benefited from having something totally different to add to their CVs and the film students found the project useful for their intended careers. Comments include:

"I am interested in camerawork but before the project, I did not have experience with filming interviews. I agreed thinking that it would be good opportunity for me to develop new skills and test working in a different domain. The project also attracted me because it was a professional environment."

"The project was a valuable experience as I faced new situations. For example I had to work at a fast pace and find good angles for the shots in various new locations, while interacting with the interviewees. Overall, it helped improve my skills and gave me more confidence."

Students who took part in the videos found the experience helpful as well; those who had come up with the initial ideas for the videos were particularly gratified to see their suggestions take shape on film. Comments from them include:

"I improved my communication skills, especially as I had never answered questions while being recorded, so it did make me a bit nervous. However, due to the experience gained from taking part in this short film, I am now happy to be involved in any future activities that are similar, so I can say that taking part in this project has also improved my confidence. Furthermore, I also gained the satisfaction of knowing that I tried to share my knowledge with others."

One student who agreed to be filmed about his placement has since gone on to write a guide on how best to obtain a place on a graduate scheme; his increased confidence has also enabled him to give a talk at the LSE on the reasons for studying mathematics and economics at university.

Students who have watched the videos have commented that they offer both enjoyable viewing and serious points and said that, as many of them previously had no idea about what a graduate job interview is like, they found the videos of interviews very helpful:

"Seeing a mock job-interview gave me an idea of what a real interview would be like."

The placements video has had the most views, seeming to have been motivational in generating student interest in applying for placements. Additionally, student take-up of other opportunities, such as a business simulation activity and mock assessment centres, has increased from last year.

Further work

Access to good video cameras would be essential to any replication of this project though Stoneham (2016) describes encouraging students to create videos with the use of Panopto (lecture-capture software). The use of these and similar technologies do provide students with the ability to create numerous short videos on various aspects of their learning.

As a result of this work, staff have seen the benefit to students of videos covering numerous aspects of employability. A company called Abintegro runs a career portal containing many activities and a vast quantity of useful videos, many of which feature employers and recent graduates talking about their roles and how they obtained them. This resource is now available for all students at the University of Greenwich under the name 'My Career Builder'.

Conclusion

Using these videos to augment sessions on aspects of employability provision has helped students to understand that they need to practise skills relating to the stages of applying for and securing a job. This project experience also suggests that other departments and faculties might be interested in creating similar videos to help their students.

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Student-Generated Podcasting for Learning and Assessment in Undergraduate History

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Abstract

This case study reflects on the implementation and outcomes of the first use of podcasting in learning and assessment on an undergraduate History course in the Department of History, Politics and Social Sciences at the University of Greenwich. It describes how the podcast formed part of a holistic series of summative and formative assessments intended to foster independent learning and transferable research and presentation skills, and to diversify the range of assessments required by students within the department. It goes on to reflect on the implementation, outcomes, advantages and limitations of using podcasting as a means of assessment for undergraduate History.

Introduction

In 2014-15, podcasting was adopted as a means of learning and assessment on the course 'Global Exploration from Columbus to Scott's Antarctic', offered to second-year undergraduate students in the Department of History, Politics and Social Sciences (HPSS) at the University of Greenwich. This course was offered for the first time in 2014-15, presenting an opportunity to experiment with diversifying the range of assessments required of HPSS students. The podcast was selected as an alternative to traditional in-class presentations, with the objective of providing students with enhanced opportunities to produce assessed podcasts based on their own original, historical research on a topic of their choice. The podcasts received both formative peer feedback and summative lecturer feedback. This case study reflects on student and lecturer experiences of the initiative, following the delivery of the course and after the completion of internal and external marking procedures.

Pedagogical and disciplinary concerns

As a discipline, History has, in recent years, increasingly come to emphasise the wider application of research and the communication of research findings, via technology and social media, to the public and to non-academic audiences (Grove, 2009). The subject area also retains its strong emphasis on the importance and utility of public lectures (outreach) and presentations. The podcasting project and assessment enhance the student employability skillset in various ways: through production of a portable artefact and applied skills; by improving student digital literacy (introducing them to technological skills and software which most of them have not previously used); by assisting the development of their presentation and communication skills (preparation, scripting, timing, delivery); by cultivating engagement through diversity of assessment. At all educational levels, the creation of podcasts is recognised as helping students "to do research, to communicate in print, to speak effectively and grab attention with sound" (Selingo, 2006).
The assessment map of this course attempted to integrate two learning activities that are considered meaningful and dynamic – the creation of a summative podcast and a related, formative, peer review exercise (see Table 1). Podcasting has been specifically highlighted

as a means 'to get students involved in activities that are meaningful, integrative, value-based, challenging, and active' (Tinker *et al*, 2007, p.19). Similarly, peer assessment is considered conducive to 'meaningful learning' (Keppell *et al*, 2006, p.453) and to fostering ownership, autonomy, transferable skills, and deep learning (Vickerman, 2009, p.222).

The student-generated content was envisaged as being usable in peer-instruction. Rachtham and Zhang (2006) demonstrate that the most profound pedagogical value of podcasting lies in the collaborative opportunities it offers to learners. Downward *et al* (2008) also find that 'the production of the podcast is incremental, revisionist and is developed in multiple learning spaces' (p.66). The podcast peer review gives students the opportunity to reflect on their own practice and that of their peers – an essential part of the process of experiential learning (Fry *et al*, 2009, pp.15-16). Finally, the peer review aspect of the exercise speaks to the essential role of the audience in the preparation and delivery of any podcast, with the added benefit of providing an alternative to the individual-centric nature of written assessments (Boud *et al*, 1999, p. 413).

Experiential learning is a key factor in the delivery of the 'Global Exploration' course, which includes a number of relevant fieldtrips and museum visits. These learning opportunities complement the podcast assessment and fits Kolb's model of the experiential learning cycle (1984). Students are first given the opportunity to become freely involved in new experiences (through designing a podcast on a topic of their own choosing); they are then given an opportunity to reflect, through the podcast peer-review process detailed below; finally, they develop their initial ideas into a 4000-word research essay that presents the possibility for independent research and the development of new understanding (Table 1).

Context

In 2014-15, forty-seven second-year HPSS students enrolled on the 30-credit course 'Global Exploration from Columbus to Scott's Antarctic.' The majority were single-honours History students, with a minority taking combinations of History with English, Sociology, or Politics.

The course requires students to produce a ten-minute podcast as one of four assessments, one of which is formative and three of which are summative (see Table 1). The podcast topic should relate to the topic of the student's end-of-year research essay and is worth 20% of the student's overall grade for the course.

Method of assessment	**Book review**	**Podcast**	**Podcast review**	**Research essay**
Word length	1500	NA	350	4000
Proportion of overall grade	20%	20%	NA: Formative	60%
Outline details	A critical review of a published book on the history of exploration.	A ten-minute podcast related to research essay topic, uploaded to the Moodle site.	Peer-review of another student's podcast; review to be shared on Moodle.	A research essay on a topic relevant to the history of exploration, pre-approved by seminar leader.

Table 1: Assessment map for 'Global Exploration from Columbus to Scott's Antarctic.'

Task structure and process

Students were offered two ninety-minute group tutorials on how to produce a podcast, in advance of which they were requested to plan their podcast using a proforma distributed via Moodle. The tutorials demonstrated the use of open-source Audacity software on University PCs and students were provided with a step-by-step guide to planning, recording, editing and uploading their podcasts and transcripts. Most students chose to use University facilities to produce their submissions; the others elected to use their personal laptops or smartphones.

Students were instructed to save their podcasts in a compatible file format and upload them to the course Virtual Learning Environment, in this case a Moodle 'Workshop' drop-box set up by the lecturer. They were also required to submit a referenced transcript through Turnitin. The podcast submissions were paired, using Moodle's automated pairing facility, and the students were given two weeks to peer-review their partner's submission, in 350 words and within a set rubric, addressing the following areas:

1. Clarity of voice and quality of recording;
2. How well the content held their interest for the full ten minutes;
3. Accuracy of information and quality of analysis;
4. How well the podcast explained the topic;
5. Overall comments.

Grades were awarded to the individual podcasts according to a previously-distributed rubric, with equal weighting given to structure, research, communication and planning. The standard of podcasts submitted for assessment was very high, demonstrating excellent engagement with a means of assessment that was new to most of the students. Those achieving grades in the first and upper-second ranges went to considerable effort with sound effects (for example, demonstrated high production values - sound quality and clarity), combined with creative use of primary source material (for example, created mock interviews with celebrated explorers) and concision in delivery of key points and information. The distribution of class marks across the cohort was as follows:

Grade band	**Number of students**
First class	11
Upper second	20
Lower second	9
Third	3
Fail	3
Non-submission	1
Total	47

Table 2: Distribution of class marks for podcast assignment.

This compares favourably with the other two summative assessments the course requires (book review and research essay), with more students achieving first-class marks (see Table 3).

Grade band	Number of students	
	Book review	**Research essay**
First class	1	6
Upper second	26	21
Lower second	17	12
Third	3	4
Fail	-	2
Non-submission	-	2
Totals	47	47

Table 3: Distribution of class marks for book review and research essay.

Finally, the individual peer reviews were awarded marks out of ten in Moodle, along with brief comments on each review's usefulness. This was intended to emphasise the level of responsibility attached to peer review (Dochy *et al*, 1999, p.338) and the importance of constructive feedback.

Outcomes

Students unfamiliar with audio recording equipment and software initially expressed concerns about their technical abilities, but most of the students' fears in this regard were allayed by the provision two ninety-minute group tutorials in the University computer lab, a detailed handout of instructions and some follow-up one-to-one tutorials. The Audacity software is especially straightforward to use and many students reported in conversation that, in the end, planning and scripting their podcast presented a bigger challenge than the unfamiliarity of the software. This concurs with the experiences described by Historical Geography students in Kemp *et al*'s study (2013, p.6).

A technical challenge emerged in the course of the peer-review exercise and grading – a small number of students had failed to save their podcasts in the required compatible format. The issue was soon resolved by some lecturer mediation between student pairs, mostly conducted by email. This technical issue was crucial, as the 'Workshop' facility in Moodle functions on the premise that all participants progress to the next stage of the exercise before a predetermined date and time. After this point, no new uploads can be accepted, so any delay in uploading podcasts or providing the peer-review can be detrimental to the student experience and to their gaining, and giving, peer feedback.

Evaluation

1. Student feedback

At the outset it should be noted that a switch to an electronic system saw low feedback rates in this academic year. Of a cohort of forty-seven students, only seventeen provided feedback. On the whole, however, student feedback about being presented with a new, unfamiliar means of assessment was positive. End-of-year course feedback indicated that students valued the opportunity to learn a new skill that could have a practical application in other courses or during their final year:

> "*Interesting new methods of assessment. Independent research tasks are always good to learn skills relevant for dissertation.*"

Students themselves expressed some surprise at how much they enjoyed the process of planning and producing a podcast – something they had not initially expected. They valued the originality of the podcast as a means of assessment:

> *"I really enjoyed making the podcast[.] I think the whole idea of using different technologies to engage people is a really good idea."*
> *"I feel the course is exceptionally well taught and very entertaining to learn. I feel pushed beyond the areas i [sic] would usually study and the unique assignments such as the podcast was interesting and ensured the course did not feel repetitive."*

It should be noted that a minority of the student feedback forms communicated an instrumentalist attitude that tends to favour familiar forms of assessment, with two of the seventeen respondents commenting:

> *"Not too keen on the podcast would rather do another essay or presentation."*
> *"Although i [sic] enjoyed the inclusion of the podcast in the course i [sic] feel that many other students were unhappy with it. I feel they felt that the podcast was unnecessary."*

On balance, the majority view appears to have been that the podcast was valuable simply because it was an unusual form of assessment. This may indicate a lack of appreciation of the full value of this transferable skill. It cannot be said whether this is the effect of a disciplinary 'blinker' or of another factor.

2. Benefits to students

There are arguments for the value of technology in higher education and for the autonomy and independent learning it encourages (Powell and Robson, 2014, p.327). Furthermore, Dale and Hassanien have suggested that podcasting "can be effective in enhancing student engagement and reflection [...] a shared learning experience where conceptual thoughts and ideas can be created spontaneously [...] lead[ing] to a more progressive and reflective learning experience." (2008, p.47).

The peer feedback element - as opposed to peer assessment or simple grading - plays an important role in student development of "an active role in the management of their own learning", as a form of "self-regulated learning" and as a means by which to improve their own self-assessment (Liu and Carless, 2006, pp.280-1). The peer feedback was, on the whole, overwhelmingly positive and constructive. Many of the peer reviews emphasised how much students enjoyed having the opportunity to hear each other's podcasts: *"clever and engaging"; "exceptionally interesting [...] good enough to pass as a [sic] academic podcast"; "refreshing and intriguing".* The overwhelming positivity of the feedback may have been owing in part to the small size of the cohort – a reluctance to criticise a classmate. Some constructive comments were made on presentational factors, like audibility and clarity of voice.

3. Benefits to lecturer

As pointed out by Kemp *et al* (2013, p.4), one practical advantage to the lecturer is the ability to listen back to the podcast as often as necessary or desired – impossible with a traditional in-class presentation – and a reduction in student nervousness. Another clear advantage was the salvaging of valuable classroom time that would otherwise have been devoted to in-class presentations. These benefits outweighed the extra time spent assisting a small number of students with technical difficulties.

Conclusion

This use of podcasting as a means of assessment on a second-year core History course resulted in a range of outcomes. The student skillset is broadened (through exposure to new software, techniques and requirements) and student learning and engagement with the subject matter are enhanced (through independent learning and exposure to others' ideas). As the podcast was to relate to the same topic as the end-of-year 4000-word research essay, students were encouraged to begin planning their research in good time (eight weeks before the essay deadline). Finally, the high level of student engagement was evident in the excellent marks achieved in the podcast assessment across the cohort (see Table 2).

This item of assessment has been retained, but some changes and improvements are under consideration. The peer review element may be improved with double rather than single reviews, to balance student tendencies to be over-positive or over-negative (Vickerman, p.224). Anonymous peer review was problematic in this instance, as, in a relatively small cohort, the podcast creator is easily identifiable. Consideration may also be given to removing the first item of assessment (book review), and replacing it with a podcast plan for peer review, to allow students an opportunity to improve their work and grade. Switching the podcast from an individual to a group exercise may also be considered, although Kemp *et al* (2013, p.4) note some student reservations in relation to the dynamics of group work.

Considerations for future implementation also include student expectations of the technological requirements of the course, as well as a minority instrumentalist attitude that tends to favour familiar forms of assessment. As noted above, one student feedback form stated that they would prefer to be assigned an essay or presentation. Diversifying the range of assessments across departments may have positive impacts in this regard.

Finally, the restriction of this sample of students to one department (HPSS) may limit the transferability of results to other departments or faculties, particularly those with a stronger technological focus.

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Flipping Wounds

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Introduction

Nurse educators need to develop more flexible approaches to learning in order to meet the needs of future healthcare workers (HEE, 2014). Using a 'Flipped Classroom' is one such strategy. This case study explores flipped learning in this context and reflects upon both the student and facilitator experiences.

The author runs a 'Wound Healing & Tissue Repair Module" (Wound Module) for post-registration (qualified) healthcare professionals, including nurses, paramedics and podiatrists. This was converted into a Blended Learning module several years ago (Atkinson, 2003) and has now been restructured, allowing students to access the module content outside the sessions and then discuss it in face-to-face, problem-based learning (PBL)/ enquiry-based learning (EBL) seminar sessions.

During the six-week (one day per week is face-to-face) module, students explore online content and apply it to a specific online virtual patient. The Week 1 introductory day sets students up for the EBL process: they each select, from a choice of five, a virtual online patient, thereby determining the EBL session group that they will be in. The morning sessions of Weeks 2-5 are 'protected time' for students to explore the online content; the afternoons are for face-to-face EBL discussions. The final day in Week 6 is given over to a morning session to complete the EBL activities and an afternoon session for students to share their learning with the whole group (see Diagram 1). The assignment for this module is based on the EBL process.

Diagram 1: Module Structure

Week One: Study Day 1	**Weeks Two-Five: Study Days 2-5**	**Week Six: Study Day 6**
All day: Introduction to the module, use of EBL and setting the scene. Choosing a virtual online patient.	**AM** – Self-directed study **PM** – Face-to-face EBL seminars (groups are linked to a virtual online patient)	**All day:** Finish off EBL and present EBL findings to whole group.
Assessment: Linked to one aspect of the EBL discussions.		

Flipped learning

There is a lack of consensus regarding what constitutes a flipped classroom. Examples in the literature range from small amounts of online videos to be accessed in students' own time (Prober and Khan, 2013; O'Flaherty and Phillips, 2015) to directed online instruction outside the classroom (either with or without use of videos) with interactive group activities during face-to-face sessions (McLaughlin, Gharkholonarehe and Esserman, 2014). What does seem to be common is the notion that students do what traditionally was done in class outside the classroom in their own time, and what was seen as 'homework' is now done in class time. This aims to ensure that the students understand the subject through a variety of active learning strategies (Herreid and Schiller, 2013; Bishop and Verleger, 2013; McLaughlin, Gharkholonarehe and Esserman, 2014).

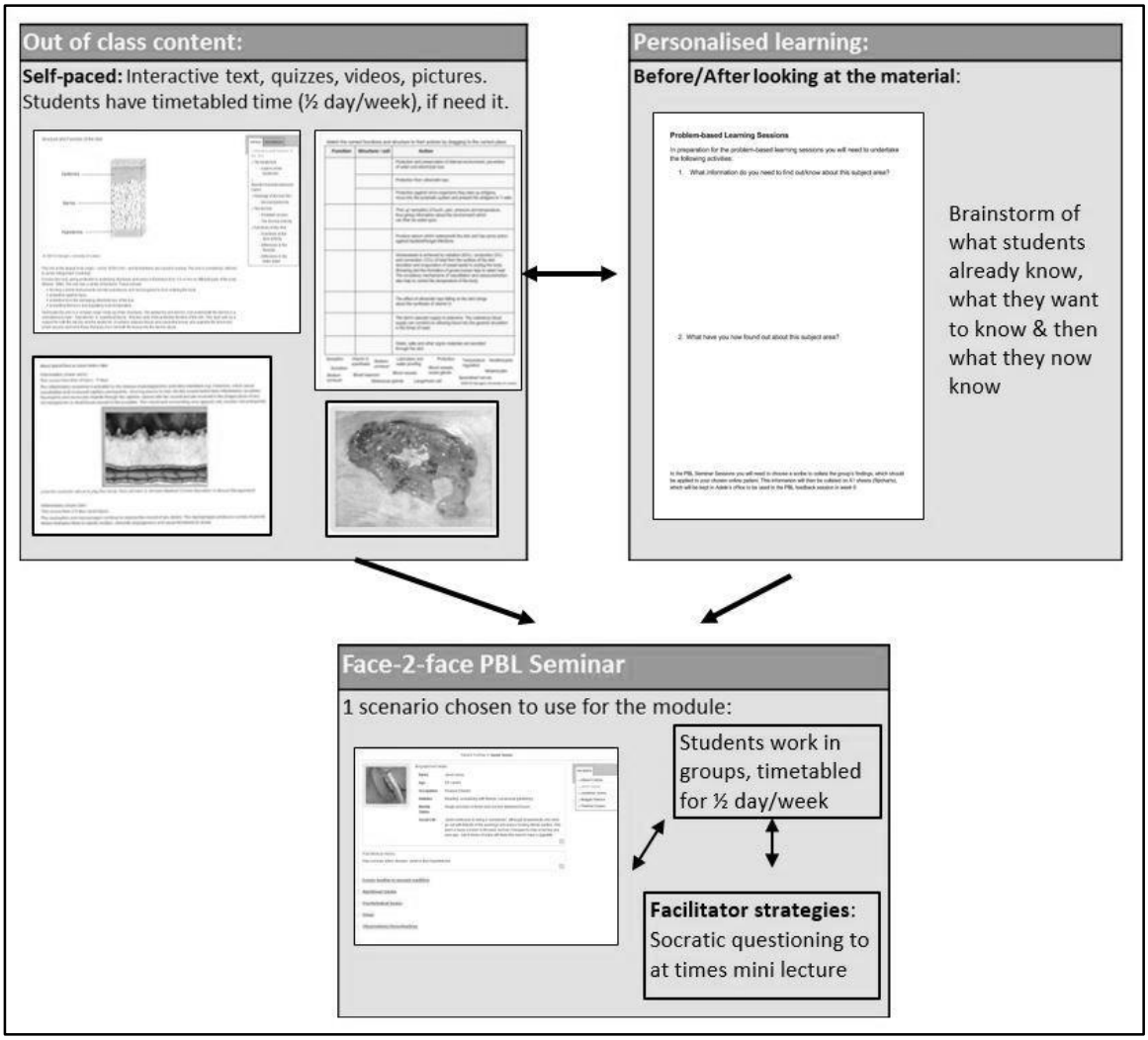
Flipping for the Wound Module aims to ensure that students have equal access to the breadth and depth of specialist interactive content. The module content is online and is made up of videos, images of wounds, reading lists, quizzes, crosswords and drag-and-drop exercises which had been updated from the blended learning module. Students can go through the content in their own time, to be ready for discussion in the face-to-face sessions. The material is presented in weekly sessions. For example, session one looks at the structure and function of the skin, physiology of wound healing and factors affecting wound healing; session two focuses on nutrition and wound healing and altered body image in wounds. Students thus have the scaffolding to enable them all to have the same content and therefore start at the same level. Ensuring that all students had access to the content material also means that they can concentrate on learning (and applying theory to practice in face-to-face sessions), rather than becoming frustrated over trying to source their own learning material (Kirschner, Sweller and Clark, 2006).

Before exploring the online material, students fill in a form (for their own use) which identifies what they already know about the topic and what areas they need to explore further. Then, after exploring the material, they add what they have learned and how they think it relates to their online patient. This helps them personalise their learning and gets them ready for the face-to-face sessions (see Diagram 2).

The content is then applied to practice in face-to-face seminars by means of a PBL/EBL approach. It is important that online activities and face-to-face activities support each other, to increase student motivation and help with students' learning (Ginns and Ellis, 2007; Khanova *et al*, 2015).

The summative assessment further provides the student with an opportunity to demonstrate an ability to solve problems and apply theory to practice by critically discussing one issue of wound management identified from one of the module's online patients, using the discussions from the EBL process as a starting point. This helps them to see the relevance of what they are learning to practice and motivates them to learn via the online activities outside the EBL sessions.

Diagram 2: Flipped Learning Process



Problem-based learning

Since the NHS demands professionals who are able to solve problems, PBL is one way of learning to do this (Amos and White 1998).

Core to PBL is the use of real-life problems presented to students, who have to work, in small groups, through the situations presented in order to reach their conclusions. A problem constitutes the starting point of a subject area, rather than knowledge (Engel 1991). However, in the context of this module, the idea is for students to learn, linking their learning to their own experiences of practice, using an online patient scenario merely to give some commonality as a basis for discussion. EBL is similar to PBL in that a problem is the starting point and knowledge is used to explore solutions. For example, in this module, the students' starting point for the wound-healing session is to ask why the patient's wound looks like this, what stage of wound healing the wound is in and what patient factors have influenced the

healing of the wound. The key difference between EBL and PBL is that in EBL the facilitator is a facilitator of learning as well as providing knowledge, if necessary, whereas in PBL the facilitator does not provide knowledge (Savery, 2006).

The EBL process

From several fictional online patient profiles written by the author, students choose one and are put in face-to-face PBL/EBL seminar groups, to explore and apply to practice the theory that they have been learning. The patient can be seen as the 'trigger' needed to start discussions (Kirwan and Adams, 2009).

Working together also forms the basis of collaborative and cooperative learning, thus encouraging deep learning through the solving of problems (Greening 1998). There are some key differences between collaborative and cooperative learning that may feature here. According to Panitz (1999), collaborative learning is more student-centred, with individuals self-selecting, for example, groups and their roles. However, in cooperative learning, these areas are designated by the facilitator/teacher. Within this module, student groupings depend on their having chosen the same online patient.

As there is evidence that a lack of guidance hinders student learning (Kirschner *et al*, 2006), the author and a colleague (who also had expert knowledge in the subject) facilitate the EBL seminars. The use of facilitators can also help students learn (Bergmann and Sams, 2012, cited in McLaughlin, Gharkholonarehe and Esserman, 2014.) Facilitation strategies range from Socratic Questioning Techniques to, at times, information giving. The latter tends to happen if groups misunderstand key concepts. What is difficult is knowing how much information to give. This has also been found by Khanova *et al* (2015) and may be because the facilitators are seen as experts and students want reassurance that they are learning. At times, it is also noticeable that some students have not looked at the material online and these students typically ask very basic questions of the facilitators. Skill is required to ensure that the students themselves answer these questions. As the assessment is designed to try to motivate the students to explore the online material, this is disappointing.

In the first EBL session, students are generally hesitant about discussing what they have learned and seem confused as to what they are to do. Having been brought up in a passive learning culture, they may not be used to this type of active learning and consequently might find the lack of structure a challenge (Strayer, 2012; Kirwan and Adams, 2009). However, once they experience the first EBL seminar, their hesitation disappears and evaluations show that these sessions are enjoyed. The EBL sessions are timetabled to run over the six weeks of the module and, in the final week, the students present to each other their findings from all the weeks. As they are used to discussing concepts and ideas with each other in their groups, the ensuing whole-group debate over their findings also helps in the learning process.

Evaluation

Best features of the module/most valued:

During the verbal evaluation of the 2015 cohort, students frequently said they liked the online activities, the EBL sessions and working with students from other disciplines. This is consistent with findings discussed by Strayer (2012). Students enjoyed being able to

discuss with peers working in other hospital trusts and areas differences in practice, stating that they learned from the other students. Again this is consistent with some of the literature, e.g. Kirwan and Adams (2009). Khanova *et al* (2015) mention that students valued the ability to look again at the online material as many times as they wanted, something that students on this module also valued.

Interactions with lecturers during the EBL seminars were another positive area, although this did cause slight tension with the lecturers. However, the fact that students saw this as a positive feature and felt they could ask questions suggests that both lecturers created a safe environment, crucial for learning (Raghallaigh and Cunniffee, 2013).

Though some students enjoyed the flexibility of the afternoon seminars and the lack of structure (Interestingly, Strayer (2012) reports that this was an area that students found frustrating.), not all of them appreciated this (see below).

There was overwhelming support for the use of online patients. Students enjoyed being able to select one from a small number, allowing them to choose one that linked to their own area of practice. This was important and in accord with the findings of Knowles (1984) and Raghallaigh and Cunniffe (2013), viz. that adults learn best when they can see the relevance of what they are learning. Students also commented that each group's having one online patient scenario helpfully provided a common goal for their discussions.

Factors that hindered learning

Students found several aspects unhelpful. Although they enjoyed the format of the module, it was initially seen as confusing. This may have been because they were not used to this type of learning, something consistent with findings from Kirwan and Adam's (2009) study, where students reported that lack of guidance made them feel nervous.

One student did not like the fact that the group came in only for half a day and felt that this was a waste of travelling time; this student also wanted more formal lectures. This might have been because she had not 'gelled' with the group and had become isolated, thus not enjoying the whole process (Case, 2007) or it might have been that she was not yet ready for the amount of self-directed learning (Brockett and Heimstra, 1991; Chan, 2001). Certainly Knowles (1984) sees self-direction as part of a continuum, with directed learning at one end and self-directed learning at the other, and part of the facilitator's role is to help students to move along the continuum.

Some students also felt that they were expected to do quite a lot of work in their own time. Though this is echoed by Khanova *et al* (2015) and Herreid and Schiller (2013), this module was different in that all the students were working and, whilst some were given time off for study days, others were undertaking the module in their own time - hence the rationale for 'protecting' study time for the half day in the morning. The importance of scaffolding and ensuring that the students have enough time to go through all the activities in a flipped learning environment cannot be overestimated. This may account for the fact that some students did not look at all the online material and, therefore, more time should be given to introducing this approach on the first day (O'Flaherty and Phillips, 2015), even though the assessment linked to this.

Lessons learned

This module was developed from a Blended Learning module, in which most of the content had already been developed and just needed the addition of quizzes and more interactivity. Nevertheless, this took time and such 'lead-in' time is something mentioned in the literature (O'Flaherty and Phillips, 2015; McLaughlin, Gharkholonarehe and Esserman, 2014). For new approaches such as this, lecturers need to be able to invest time in re-thinking old models.

A good working knowledge of digital media to ensure that students get the best out of the online materials is essential. Khanova *et al*'s (2015) experience showed that the quality of the online material seemed to be important. Simple things, such as spelling mistakes and poorly-organised material, could prevent students from understanding what was meant. It is similarly vital to exploit digital media to ensure provision of a variety of different ways of learning, such as video, quizzes and pictures (in the case of wounds), so that students see these as something a bit different to engage with.

As the facilitator is crucial to the EBL process (Bebb and Pittam, 2004), the ability to use questioning skills and to be the 'guide on the side' rather than the 'sage on the stage' is important.

The literature suggests a variety of strategies to motivate the students to undertake the online activities. Strategies that would be appropriate in this type of EBL environment range from using clickers to check out learning in the classroom sessions (Schlaret *et al*, 2013; Flahery and Phillips, 2015) to reflective pair-and-share questions posted online twenty-four hours before the session (McLoughlin *et al*, 2014). Pair-and-share questions allow students to provide a structured answer to specific questions and the teacher shares selected ones. Within the context of this module, it might be that students share online the notes that they prepare for the personalised learning sheets (see Diagram 2) and these are discussed within the EBL sessions.

The way forward

There is no doubt that students enjoy learning and learn more when they are actively engaged in this process. Mostly, however, students' prior learning has been passive, which makes it difficult to facilitate the adoption of an active approach in such a short module. The author intends to persist with flipped learning, but to spend more time during the first study day on introducing and explaining the rationale for this approach. She will use clickers for some sessions and ask students to upload their 'personalised learning sheets' twenty-four hours before the session. Finally, facilitators also need time to adjust to the different skills required in flipped learning and the author intends to work with colleagues to practise techniques such as Socratic Questioning and other ways of helping students that do not rely on traditional lectures in face-to-face seminars.

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E-teaching as companion to e-learning; supporting digital pedagogies and practice in higher education

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Abstract

The literature of education technology suggests that greater attention has been paid to the student experience of e-learning than the development of academics as e-teachers. Technology has been widely promoted as an 'enhancer' of student learning and there is an expectation that academics will make use of Virtual Learning Environments (VLEs). Indeed, the adoption of digital tools is an essential component of current interest in flipped and flexible approaches to higher education. However, the majority of VLE usage may more nearly resemble a digital document dump than the interactive and collaborative pedagogies predicted by the early promises of e-learning transformation (NCIHE, 1997). This paper seeks to shed light on the hitherto under-researched area of the relationships academics have with their VLEs, in particular with regard to reluctance or resistance to move from face-to-face to online practice. Whilst the sector has invested into inquiry into the aspirations and motivations of the digital student (Jisc, 2009), the day-to-day digital interactions of staff who teach and support learning and, in particular, those without technology expertise or natural digital inclinations, have gone largely unrecorded. This paper offers some preliminary findings of a three-year action research project investigating attitudes towards virtual learning though a teacher-education lens rather than a traditional technology-training one. Findings have been converted into advice for academics looking to make the shift from face-to-face to e-teaching and blended practices. This guidance for staff may be usefully positioned alongside what is already known about the student experience of e-learning.

Introduction

In contrast to the transformative promise of Technology Enhanced Learning (TEL), there were early indications that all was not well with both the adoption rate of new technologies and the rationale for moving to virtual design and delivery, whilst critical reviews have been explicit about the failure of VLEs (Liseweski, 2004; Bell and Bell, 2005; Conole, 2004; Clegg *et al,* 2003; Freisen, 2008; Saljo, 2009; Selwyn, 2013). Research into the value of technology has been accused of lacking rigour (Bennett and Oliver, 2011; Gunn and Steele, 2012) so that it becomes *'…extremely difficult to trace the impact of educational research to anything that really matters'* (Reeves *et al*, 2012:57). More recently, OER, MOOC, social media and mobile devices have revived early promises of transformation (Anderson, 2007; JISC, 2009; Conole, 2010), but enthusiasm contrasts with reports of low appetite for change (Heirdsfield *et al,* 2011; Sheward and Hamilton, 2012; Watling, 2009) and numerous reports cite deficits of time, support and appropriate resources to support academics to make the digital shift (Beetham *et al*, 2009; Walker *et al,* 2012; UCISA, 2012, 2014). Negative views like these have contributed to the gloomy conclusion put forward by Feenburg: *'…the promise of virtual learning in the 1990s has come to nothing and elearning within the university has failed.'* (Feenburg, 2011:2)

In the increasingly digital environment of higher education, individual reluctance to engage is often rendered invisible. Whilst like attracts like and technology enthusiasts work well

together, those who might label themselves as 'digitally-shy' risk exclusion: less likely to read the TEL literature, attend TEL conferences or apply for TEL funding, the digitally shy or resistant are also less likely to get involved with institutional technology events or sign up for technology-training opportunities. However, the need for academics to come out from their analogue shadows has been recently highlighted. Lack of staff engagement was identified as a barrier to technology adoption (UCISA, 2010, 2012, 2014) whilst increasing digital engagement is explicit in the HEA's Flexible Pedagogies reports (Gordon, 2014). Further raised awareness of the experiences of academic staff, for example Ecclesfield *et al* (2014), has fed into the work Jisc has carried out around addressing the digital capabilities of staff who teach and support learning. This builds on earlier work by Jisc (Beetham *et al*, 2009) which underpins the recent development of a digital capabilities framework (Jisc, 2013, 2015) and partnership work with students (Healey *et al*, 2014; Killen and Chatterton, 2015). Raising awareness of the experiences of academic staff with technology has provided a useful first step, which is ideally followed by the identification of authentic ways to ensure that future digital engagement is encouraged, maintained and rewarded.

Methodology

Traditionally, VLE support has been located within the realm of technology training, whilst effective pedagogy has sat within teacher-education programmes. This paper addresses an attempt to bring the practical and pedagogical together through an accredited teacher education course, Teaching and Learning in a Digital Age (TELEDA), which was delivered and assessed entirely online. Based on the principles of experiential learning, staff were enrolled as students on the institutional VLE (Blackboard), where they engaged with digital tools and were asked to reflect critically on both transferring the experience to their own teaching and the effectiveness of the course as a means of digital CPD and teacher education. The aim of TELEDA was to enhance the e-learning experience of students by prioritising time and space for accredited e-teaching development. [1]

Developing TELEDA through an action research methodology reinforced the participatory nature of the course and maximised the unique position of participants as both learners and teachers. The TELEDA pedagogy aimed to expand knowledge production rather than reiterating traditional transmission and consumption models. There were no lectures on TELEDA. The learning was interactive and collaborative, grouped around individual subject blocks which covered Online Design, Introducing OER, Social Media and Digital Resources. Content was provided through text, images, audio and video, but focused primarily on discovery and discussion. Participants were asked to search for relevant content, which might be papers or multimedia resources, which was collected and shared using social bookmarking tools. Twitter was used for synchronous and asynchronous tweet chats, providing opportunities for engagement in supportive collegial groups. Course design utilised the Five Step Model of e-moderating (Salmon, 2000) with collaborative activities built around the Conversational Framework (Laurillard, 2001). Constructivist scaffolding from the tutor supported the early stages of participant engagement with virtual ways of working, with this

[1] The TELEDA course emerged from a twelve-month, HEA-funded project, Embedding OER Practice (Watling, 2011), which bought together academics with a primary interest in educational development rather than technology, but who developed digital capabilities as the project progressed. This became the catalyst for the development of TELEDA, which aimed to support academic confidence with digital pedagogies and practice.

gradually being withdrawn as levels of digital confidence increased. Throughout the course, participants were expected to interact with content and colleagues, while all the time traversing the iterative rounds of the experiential learning cycle.

Data Analysis

The key outcomes from TELEDA have been synthesised into three areas of advice for aspiring e-teachers and staff in departments supporting CPD and teacher education. These three areas include suggestions for mitigating any potentially negative consequences from TEL engagement and turning them into positive outcomes.

1. Avoid the 'myths of digital confidence'

> "*I have made assumptions previously about the skills of students I am working. I presumed they would find learning in an online environment 'easy' as this was something that they had chosen. I was wrong.*" (Watling, 2015)

Making over-ambitious assumptions about digital ways of working risks lack of engagement in TEL opportunities, low enthusiasm for digital activities and poor retention rates. Myths of digital confidence are prevalent amongst those who support and mandate technology and fail to empathise with digital fear or diversity. While some academics might be openly frank about their perceived lack of digital aptitude, others may appear digitally confident but lack experience with VLEs for academic purposes. Digital working styles are as unique as individual handwriting or fingerprints. Everyone operates online in different ways, which makes it problematic to apply a 'one-size-fits-all' digital competencies' checklist or framework.

Advice for avoiding the myths of digital competence includes managing learner expectations and building in time for digital practice

Students take cues from tutors and, if the tutor is negative about the VLE or provides poorly-structured online resources, then they will be less likely to engage (Masterman, 2010). Addressing e-teaching is an opportunity to improve the e-learning experience. Time to practise communicating online (for example, an introductory forum which includes tasks like attaching a file or uploading a photograph) offers safe space to experiment. A 'hopes and fears' activity, which encourages sharing previous digital experiences, might reveal unexpected gaps in knowledge and indicate where appropriate support and guidance is needed. Discussion forums and activities using wikis, blogs or journals do need to be nurtured.

> "*I realise now how naïve I was in the past to simply open the discussion board with a question and expect the students to participate. As a tutor I have to make it possible for my students to participate through the design of my tasks.*" (Watling, 2015)

Some participants may feel nervous about going first or making a mistake, whilst confident others can dominate any fledgling conversations. Sensitive approaches are required. Since the absence of face-to-face clues can cause online messages to be misinterpreted, 'netiquette' advice, either pre-formed or developed by the group, is useful. Guidance might include avoiding capital letters (which can be perceived as shouting) and to use emoticons to convey intended emotions like humour or fear. This might all seem unnecessary in these

days of email and social media, but professional communication is a valuable attribute and the ability to manage this appropriately in a range of digital media should not be assumed (Salmon 2011, 2013).

2. Coping with identity blur

> "*I now realise the transition from being an effective classroom practitioner to an effective online practitioner is complex and challenging.*" (Watling, 2015)

The term 'e-lecturer' is rarely seen. The literature includes labels like facilitator, instructor, moderator and trainer whilst Goodyear *et al* (2004) listed eight different roles an effective e-teacher needs to perform. The emotional impact of the shift from 'sage on the stage' to 'guide on the side' should not be underestimated. Reliance on digital media contrasts with the traditional social and personal nature of education, whilst teaching online involves coming to terms with varying degrees of invisibility. Establishing an identity and rapport has to be worked at and TELEDA invited students to post photographs and short introductory video. Using blogs or wikis for asking questions and setting specific times for responses can establish VLE visit routines. Though the lack of instant face-to-face cues and feedback often appears challenging, this is always balanced by the beneficial capacity of VLEs to cross traditional barriers of time and distance, to encourage student-centred, independent learning and to ensure that everyone has an equal opportunity to participate.

Advice for coping with identity blur includes ensuring interactive and experiential approaches within online learning designs

> "*It seems obvious now that the lack of student engagement with my online resources was due to inappropriate design. I placed too much emphasis on text based, self-directed learning and didn't recognise the important role of interaction between students and probably most importantly, investing time in building solid foundations and helping students develop skills for online learning.*" (Watling, 2015)

Since digital resources have to work hard to sustain audience interest, the adoption of activity-based content (ABC) is more likely to prevent enthusiasm lapse than passive transmission methodology. Activities should include tasks, problems and choices with opportunities for students work in pairs, threes or larger groups. Allocating roles (such as task scribe, collector of content or reporter for sharing the group experience to peers) can maintain momentum. Traditional face-to-face content such as that transmitted in lectures rarely translates well to online environments. A fifty-minute recording, complete with coughs, sneezes and a blank wall when the lecturer has moved away from the camera, can be made more effective if edited into smaller blocks, with summary information or formative assessment questions slotted between sections. A narration over a set of presentation slides has all the advantages of an online resource; it can be revisited, stopped, started and accessed at a time and place of the student's choice. However, the potential for a more meaningful approach to digital learning will always be enhanced if multiple media are deployed to present content via more stimulating, interactive peer activities.

The literature on digital education offers different approaches and ideas (Salmon, 2011, 2013; Laurillard, 2001; Garrison, 2014), but the most valuable CPD activity is an experiential or immersion approach, which can be achieved through taking part in a MOOC.

> "*The experience of being isolated and lacking human connection also supported my feeling about the importance of the social in the learning experience. There are lots of ways to connect I didn't know about.*" (Watling, 2015)

Massive Open Online Courses (MOOCs) offer free opportunities to experience the emotions involved in learning online. These can include fear, frustration and time constraints, the effect of which on attainment should not be underestimated. MOOCs show how other institutions are exploring virtual learning. They give access to ideas for both the design and delivery of content as well collaborative activities. Some large courses have fixed start and end dates, involve synchronous or asynchronous discussions and peer review, but can still be joined at any time or dropped in and out of. MOOCs can also comprise smaller chunks of learning which are each more like an Open Educational Resource (OER) and can be undertaken individually. Courses offered by Futurelearn[2], the partnership between the OU and a consortium of UK universities, are worth exploring, whilst the Khan Academy[3], Coursera[4] and Udacity[5] have a range of short and long MOOCs. The value of any MOOC experience is the view of VLE from the e-learner perspective. This offers aspiring e-teachers insight which can be used to enhance the effectiveness of the design and delivery of their own online resources.

3. Preparing for a 'pedagogy of uncertainty'

> "*Being an online learner is confusing and disorientating. There is no tutor to check what you are doing 'is right'…. as a tutor in the classroom you can be on hand to make connections for students or clarify activity instructions, this is less easy online, you have to almost pre-empt questions.*" (Watling, 2015)

VLEs offer a blend of benefits and barriers but all usage involves a sense of uncertainty deriving from lack of face-to-face contact. It can be difficult to see if e-learners have arrived online and accessed resources or to know if they will engage in activities. Though this is true of all educational opportunities, it can be harder to assess when students cannot be immediately seen or heard. VLE monitoring features are useful indicators of presence, whether actively engaged with resources or not, but less helpful with regard to the quality of individual engagement. However, uncertainty must not be perceived as wholly negative. It can also involve surprise and delight, such as when end-of-block or end-of-course feedback shows students had engaging and productive experiences which they valued and appreciated. The advantages of VLEs to cross barriers of time and distance, and ensure equal participation in activities, will always offer a positive balance to what can feel like negative trials and tribulations of e-teaching.

> "*As a novice online tutor I instinctively reverted back to what many novice classroom practitioners do and focused on transmitting content, although this was something I would always try and avoid in a classroom setting….I recognise now that online learning is all about the activity of the student and what you get them to 'do'.*"
> (Watling, 2015)

[2] https://www.**futurelearn**.com/
[3] https://www.**khanacademy**.org/
[4] https://www.**coursera**.org/
[5] https://www.**udacity**.com/

Advice for coping with a pedagogy of uncertainty includes the use of signposts and acknowledging the complexity of VLE pedagogy and practice.

E-teachers can help e-learners by providing appropriate signposting to manage expectations, indicate timescales, give key dates (such as assessment deadlines) and make clear the order and sequencing of activities. Sources of technical support, contact details for staff and guidance on participation in activities like online group work all need to be clearly signposted. It is useful to ask a critical friend who is unfamiliar with the learning environment to navigate around it and give feedback. The prevalence of social media creates a tendency to take for granted that e-learners can instinctively use VLE tools and have appropriate knowledge about what learning online involves. However, using a VLE for educational purposes often requires a more formal approach than the social habits encouraged by sites like Facebook and Instagram. Clear signposting to information on effective online learning, together with incentives to interact (like shared quizzes or treasure hunts) can help settle a new group and add a relaxed element which doesn't detract from formal learning but encourages the habit of logging on and checking for new content.

> *"Preparation is not just about being technically competent, it is about ensuring learners are able to deal with the social and emotional challenges of learning online too.*" (Watling, 2015)

Summary

This paper has shown how the TELEDA teacher education programme aimed to support academics to develop their digital pedagogy and practice and become more effective e-teachers. The TELEDA course offered insight into the influences on the attitudes to their VLEs and on the practice of staff who teach and support learning. A number of findings emerged, including how deeply entrenched was the conception of a VLE as a place to put information: the prevalent primary focus was on transmitting content rather than approaching the VLE as a place to develop interactive learning opportunities. For many participants, the concept of e-teaching as the development and facilitation of online collaboration was a new approach. Though it could be argued that e-teaching is implicit within e-learning, the TELEDA experience suggests that, unless e-teaching is made explicit and unless teachers have the prerequisite technical and pedagogical knowledge to create effective online learning environments, there is a real risk that those mandating and promoting digital technology will continue to make unrealistic assumptions about baselines and starting points. TELEDA does give participants a realistic experience of e-learning: as a consequence of their participation, they reported increased empathy with the online experiences of their own students; their reflective journals and assessed eportfolios indicated how the experiential nature of the course design increased the likelihood of their going on to adopt digital ways of working in their own teaching practice.

Conclusion

In order to promote VLE engagement and develop teachers' potential for enhancing the student experience, there is a need to be realistic about where digital baselines and starting points are positioned. Achieving this requires conversations and partnerships between academics and education developers, as well as between departments responsible for technology training and those who lead on CPD and teacher education. TELEDA reinforced the value of experiential learning. Participants were immersed in real-world collaborations

with colleagues and were supported in the adoption of new identities as e-teachers. Sharing thoughts and ideas about attitudes to VLEs and practices within them is now being incorporated into future digital development initiatives. This research shows how investing in the time and resources to support a shift from a technology training model to a teacher education one can significantly increase the rate of adoption of meaningful and relevant digital pedagogies and practice by staff who teach students and support their learning.

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Southampton Feedback Champions: Students and staff improving feedback together, University of Southampton

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Introduction

This case study is about a project undertaken in 2014-2015 at the University of Southampton by Laurence Georgin (Senior Academic Coordinator and Manager of the project) and twenty-seven student 'champions', who took part in the project and who were selected from all eight University Faculties.

The Southampton Feedback Champions project originated from a previous European project, SPEAQ (Sharing Practice in Enhancing and Assuring Quality - https://speaqproject.wordpress.com/), which aimed to develop initiatives that improve quality, practice and culture within higher education institutions. Each institution involved in SPEAQ had to identify an in-house issue and work with its staff and students to resolve it, using a bottom-up approach. Southampton staff and students identified feedback as a key issue, reflecting national and even international students' dissatisfaction with feedback (Evans, 2013). As part of SPEAQ, the website (http://blog.soton.ac.uk/gmoof/) which was created aimed to gather useful resources to help staff and students improve feedback. These resources included interviews with key staff who had been recognised (through the Students' Union Excellence in Teaching Award for Feedback or the National Teaching Award for Most Innovative Teacher of the Year) for delivering high-quality feedback. The project was supported by the University's Pro Vice-Chancellor for education.

The initial project received positive feedback from the European Commission, but it was clear that the topic needed more attention - a bigger project would enable the team to gather further resources. A bid was successfully put forward to the University of Southampton Education Enhancement and the new 'Southampton Feedback Champions' was born. This project followed the successful model of the i-Champions (Harvey, 2015) and involved students working as agents of change ("Students as agents of change," Jisc, 2011). Indeed, with "higher student fees […] changing the relationship between institutions and students", institutions need to pay more attention to students' expectations and respond to them in creative ways ("Students as Agents of Change," Jisc, 2011), Entering into a partnership with students therefore seems a productive way to involve students in the delivery of their education so that it remains as relevant as possible to their needs as future graduates looking for jobs in an ever-more-challenging jobs market.

Methodology

The new project built on SPEAQ and aimed to explore the creation, collection and application of feedback in a full range of contexts and through a variety of tools and mechanisms with the potential to enhance good feedback practices. Students were employed as Southampton Feedback Champions (SFC) to collect and develop further examples of good feedback practice as identified by Southampton students and staff. SFCs

were at the heart of the project and took on roles as researchers, project managers, communications officers and conference organisers and speakers. They worked in collaboration with Laurence Georgin and two senior advisers, who shared (via group training, one-to-one training and mentoring) their expertise in leadership, project management, professional development and resources design. These skills are particularly important for students to develop, as they are not always covered within the curriculum.

The intended outcomes of the project were:

- a better understanding of the feedback-related issues;
- identification of a range of solutions related to these issues;
- collection of best practices from all disciplines;
- additional feedback-related resources available to staff and students;
- increased collaboration between students and staff on learning and teaching issues.

During the activities that took place, project participants:

- carried out qualitative research with over 100 staff and students;
- produced a report, based on the research outcomes, which identifies the causes of feedback-related issues and offers a variety of solutions for students and staff;
- collected exemplars of good practice, as identified by academics and students, including practical examples of tools and technologies which can be used to support more effective feedback practices;
- developed a website showcasing the project's findings, resources and the SFCs' reflective blog;
- developed an interactive tool to educate students about what feedback is, what their role in it is and why they should care about it;
- established a Twitter account and a Facebook page promoting the project outcomes;
- organised a student-led conference on sharing good feedback practice.

Research: collecting examples of good practice

The SFC research was conducted using an interpretative approach to data collection and analysis. Such a method was chosen because project goals required a less rigid approach to interpreting meaning and understanding. Data was collected through semi-structured interviews and used a non-probability sampling.

To ensure representativeness, each faculty was represented by a team made up of:

- one postgraduate (PG) student who played a supervisory role;
- two undergraduate (UG) research investigators who conducted the interviews.

This composition of teams allowed the research-experienced PG students to introduce research practice to the UGs and mentor them in the best practices of qualitative interviewing.

Faculty field teams were responsible for a minimum of twelve interviews, with each UG research investigator responsible for interviewing:

- two members of the teaching staff;
- two PG students;
- two UG students.

The respondent population was reached largely through convenience and random sampling. In an effort to encourage participation, incentives were given to students. PGs ensured the representativeness by making certain that the UGs identified people from different academic disciplines, so that varied perspectives were captured for analysis (Flick, 2009).

In preparing students for the field, Laurence Georgin organised two workshops: a leadership workshop for PG students and a data collection/ethics workshop for UG students. Two semi-structured interview guides (Staff and Students) of five essential questions were designed by students and LLAS staff and used by student researchers in the field (Flick, 2009).

	Staff questions
1	List the different ways in which you give feedback
2	What do you think characterises good feedback? And why?
3	What do you expect students to do with the feedback you give them?
4	Do you have an example of a good feedback technique you would like to share? (either your own or others')
5	Do you have any suggestions on how feedback practice can be improved?

	Student questions
1	List the different ways in which you receive feedback
2	What do you think characterises good feedback? And why?
3	What do you do with the feedback?
4	Do you have an example of a good feedback technique you came across? And who used it?
5	Do you have any suggestions on how feedback practice can be improved?

The open-ended construction of these questions was designed to elicit rich data on respondent opinion concerning matters of feedback procedure and delivery (Silverman, 2001). Moreover, this open-ended construction in most cases led to follow-up questions which captured a wealth of data. Interviews were tape-recorded with respondents' permission and subsequently transcribed (Flick, 2009).

The raw data was uploaded to a spreadsheet, with separate worksheets for student and staff data. Spreadsheet® allowed for easy manipulation of the raw data and thematic analysis was then done in three phases:

1. by respondent group: student or staff;
2. by faculty;
3. per individual question.

In the first phase of analysis, the data was analysed by drawing out codes related to each faculty in an effort not to lose any nuanced information from an initial general analysis. For example, students within the medical faculties had required different delivery of feedback from that required by social scientists. Following the identification of codes by faculty and question, the data analysis team analysed the results for manifest themes which painted a picture of the efficacy of existing policies or highlighted the disconnect between student and staff need (Braun and Clarke, 2006). Secondly, using the identification of the themes, the analysis team compared faculty-specific staff and student responses for nuanced information on faculty feedback practice and policy. Thirdly, staff and student themes generally were analysed separately to monitor trends across campus and all results reported (Flick, 2009).

The analysis was carried out by a small group of students (PGs and UGs) and was translated into an initial report, which highlighted the following points:

- Need for more timely feedback: feedback on one assignment needs to be delivered before submission of the next. Once the module has been 'passed', students perceive feedback comments as worthless for other modules, which might explain why they do not always collect their transcripts.
- Fear of engaging with feedback: lack of staff training on how to provide feedback, together with a jaded attitude, often translates into students' not feeling encouraged to seek feedback, not feeling at ease to discuss it and fearing humiliation.
- Lack of feedback 'education' for students: students are often unaware of the different ways in which feedback is delivered to them, viewing it as merely the written comments on their cover sheet. They also rarely view feedback as a two-way process in which they have a role to play.
- Lack of staff training: it is felt that there is a lack of training for staff, especially new staff, PhD students acting as markers and staff coming from industry. This may result in non-effective feedback being delivered to students and potentially a lack of consistency in marking.
- Lack of consistency in the delivery of feedback: feedback delivery is very faculty-specific, with some faculties having specified formal practices based on students' needs and module construction. There is a need for a University-wide feedback culture, which shares good practice and promotes consistency in feedback delivery.

The report, supported by references in the field of feedback and assessment (Gibbs, 2015; Price et al., 2008; Sambell, 2011), was then used as a basis for the project's conclusions and recommendations. These findings may be accessed at http://blog.soton.ac.uk/feedbackchampions/what-is-it/ and are summarised below:

Fostering a supportive feedback culture	The project believes that in order to improve feedback at the University of Southampton, we need to foster a supportive feedback culture, in which staff and students recognise what effective feedback is, they feel safe and comfortable to discuss it and they engage equally in the process in order to maximise their potential. This culture is based on three main principles:
1. Education for all	Educate students and staff about effective feedback, the different ways in which they receive it and their role within it
2. Safe communication	Promote a safe and comfortable environment which nurtures students' agency and encourages them to engage with staff into a feedback dialogue
3. Active engagement	Encourage students to take control of their learning and staff to enable them to do so, so that both can engage in the feedback process and make it more effective
Encouraging Assessment for Learning (AfL)	As well as recommending to foster a supportive feedback culture to improve feedback at University, the project encourages the University to adopt an assessment approach based on Assessment for Learning, where feedback is key and which views assessment as a way to 'help students improve their learning' and enable them to become independent learners for life, and not just as a measuring tool which was often referred to in a negative way in the interviews carried out as part of the project.
Ongoing Evaluation	Finally, for this feedback culture to remain active and adapted to the needs of its members, it needs to be reviewed and evaluated regularly. This can be done via mid-term or end-of-term evaluation forms, student-staff committees or the National Student Survey (NSS), which are all ways to reflect on teaching practices and engage students in the process. Staff and students alike are not making the most of these opportunities and should be encouraged to do so.

Dissemination: translating the report into different messages for different audiences

In order to disseminate the project's findings, the SFCs engaged in a wide range of activities in which the project's key messages were adapted to the various audiences it addressed. These are described below.

Website and social media

The website (http://blog.soton.ac.uk/feedbackchampions/) was created by a student intern as a tool to share good feedback practice across the University and promote a holistic view of feedback as a continuous dialogue between all members of the University community. It was complemented by a social media presence on YouTube, Facebook and Twitter. Including as it does a wide range of best feedback practice, tools and resources for staff and students, it constitutes a central place for all teaching staff, students and professional services to engage with feedback, share good practice and keep the feedback dialogue open. As it proved challenging to find a suitable format for both staff and students, the website underwent various transitions.

Staff and student events

The SUSU stall

The stall allowed for a line of direct conversation with students, as SFCs asked them for their opinion on what makes for excellent feedback and how they could pledge to improve their role in the feedback process. Students were almost all shy initially, but the Champions' coaxing, with examples of poor or useful feedback they themselves had received, soon produced many strong opinions about exactly what constitutes fair feedback.

The Biological Sciences drop-in lunch event

SFCs also helped to co-host staff events within departments, such as the Biological Sciences drop-in lunch event, which attracted twenty-one members of staff. The faculty was presented with the project findings: since the event was both stimulating and illustrative, points of discussion were raised by many.

Some senior lecturers were greatly interested by the project's findings. The National Student Survey feedback scores for Biological Sciences had been somewhat disappointing in the previous years, leading to an overall decline in the department's national placing, despite the excellent facilities and teaching quality it offers. With the tweaking of the feedback process over the years and the SFCs' suggestions on potential ways to improve current methods, there ensued a lively debate about the future direction the department should take in improving feedback methods.

As direct result, the Director of Programmes congratulated the members of the project team for the success of the event and informed them of a reinforced feedback policy within the Biological Sciences department. Additionally, lecturers within the department later said that the event had been highly stimulating and popular amongst staff, with the final number in attendance at the event being much higher than average.

Conference

The conference was well attended, with around seventy participants, including staff and students, even though there had been a worry that students would not be interested in spending a day talking about feedback. Keynote speakers included key names in the field of assessment and feedback, such as Tansy Jessops from the University of Winchester, as well as senior education managers at the University and, of course, the Feedback Champions, who planned the day, delivered a talk and managed the afternoon group discussions with all the delegates. As students attending the conference, SFCs were pleasantly surprised and quite impressed. Furthermore, as part of the organising team, they were really proud to be there because it had been laid out in a professional manner and many staff members were present; it was pleasantly reassuring to see that the staff cared about improving feedback practices, despite what students might sometimes think. SFCs were also very proud to have been members of the team that made the conference happen.

In the afternoon group discussions, five teams of two feedback champions worked with groups of staff and students on each table and talked honestly about feedback. It might have been the first time that many staff members really understood what sometimes infuriates students about feedback. For students, it was definitely the first time they realised that staff too had problems with feedback. The staff seemed interested and openly pursued ideas about finding new and more interactive ways of communicating with students. It was enlightening and it gave a great platform for honest communication between the two bodies.

As a result, the conference was a success. One student participant commented: *"The conference was amazing. I'm a student and it actually helped me get more insight of what to expect from my feedback!"*

Video

To further publicise the SFCs' project, a video was compiled by three of the student champions. It was created in collaboration with the University's Institute for Learning Innovation and Development (ILIaD). The aim was to create a vibrant visual resource to increase awareness of the project amongst University staff and students, as well as amongst a wider audience. Before making the video, the three students worked together to come up with an effective script that would, within the set time limit, portray the numerous aspects of the project; they brainstormed ideas on keeping the video dynamic to sustain viewers' interest. This proved to be a challenge, as all three had limited experience in script-writing or video-making, but, with a little guidance from media staff in ILIaD, the task was soon accomplished.

After introducing the project and providing a brief background to the Southampton Feedback Champions initiative, the team focused on defining what good feedback is and highlighted the key findings from the data collection process, in the hope of making a positive change to feedback exchange within the university. They also included future events and outlined resources available for both staff and students to enrich their educational experience. The video can be found at https://www.youtube.com/watch?v=PWIn6alkBjE.

For SFCs, working on this video project, being able to voice students' reflections on the feedback process and communicating those to members of staff, the very people responsible for providing the feedback, was an invaluable experience. It enabled them to work as change agents (Dunne *et al*, 2011; Healey, 2012), allowing them to voice opinions and views, not only their own, but those too of fellow students, in the hope of bringing about a constructive change in the feedback-giving and -receiving culture within the university.

Interactive tool for students using Articulate Storyline

Over the summer, and again in collaboration with a Multimedia Developer from ILIaD, a Southampton EXCEL Placement intern produced the final project resource. This new interactive tool is designed for students to get to grips with feedback at university and is called 'FEEDBACK FOR SUCCESS – Everything you need to know about feedback'. The tool is available at http://www.edshare.soton.ac.uk/14842/1/story.html and includes the following sections:

- Why students should bother about feedback
- The different types of feedback
- Understanding difficult feedback
- Using feedback to improve your grades
- Academic appeals explained
- Using peer feedback
- Further resources

The tool is intended to inform students about feedback in an easily accessible format and in one place, giving them the ability to improve their learning experience.

The future: the challenge of embedding good practice

To conclude, the outcomes stated at the beginning of this paper have been achieved. The project has produced a better understanding of the reasons why feedback was not always working for our students and we have gathered many examples of good practice aiming to resolve the issue. However, ***embedding*** good practice across the whole institution will be challenging. The bottom-up approach, on which the project was based, was a fantastic way to identify good practice across the institution, but it has its limitations and needs to receive an institutional push to support the culture change it suggests if it is to go beyond being merely a repository of University-wide good practice initiated by passionate educators.

Thankfully, the Pro Vice-Chancellor for education has tasked a group of senior people to start a reflection on assessment, in order to identify ways to transform assessment and, particularly, its frequency, as a means of improving feedback as a result. Additionally, a new professor specialising in assessment and feedback was recently appointed to the School of Education. They are carrying on the conversation left open by the SFC project and are organising a series of discussions about feedback and assessment, one of which will showcase a small-scale trial carried out as a result of the SFC project. The trial was done in collaboration with a lecturer and aimed at implementing peer feedback and self-assessment as part of an existing module. The theme was chosen specifically as it had been highlighted and recommended as good practice by the SFC project. It was a success with students who took part and they gave such extremely positive feedback as:

"Peer feedback was really useful! I wish we did it more in other modules."
"Having to comment on other students' work made us really integrate the assessment criteria which was useful for our own work."
"we received guidance on how to give feedback to peers so it was not as daunting as it could have been."
"Self-assessment (appraisal-type marking) was useful as you know what you're going to be marked on so you know what to focus on. Of course it helps to have a look at the criteria in advance because if you comment on them at the last minute, you realise everything you haven't done but by that time it's too late."

These comments show that the project has started having a direct impact on teaching practice and student satisfaction and that things are beginning to change, with concrete actions being taken in order to improve feedback across the University, even if the process may be slow. However, as Trowler *et al* (2003) suggest, 'cultural change takes time' and, although the SFC project has not achieved a complete cultural change, it has moved in the right direction and sent ripples across the institution, which might in time result in the culture change which was hoped for at the start of the initiative.

Nonetheless, the project gave a fantastic opportunity to many students to be involved in institutional change and to have a direct impact on their university's practices. For many of them, it was the first time that they could go beyond voicing their opinion and become agents of change, while simultaneously discovering what happens 'behind the scenes' of educational practices. Through their experience as champions, many of them felt more empowered. They also recognised that the experience had contributed to making them more employable, something which, in today's increasingly competitive jobs market, is undeniably an advantage for students. Finally, the project was recently highlighted by the Pro Vice-Chancellor for education in the Times Higher Education (Havergal, 2015), as an example of good practice within the University. This is very encouraging, as it shows that the work carried out by the SFCs has been valued at the highest level of their institution.

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Peer Observation of Teaching in E-learning Environments in UK Universities

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Abstract

Peer observation of teaching (POT) is presented as a valuable mechanism allowing for the dissemination of 'best practice' within university teaching. With the rapid rise of online learning courses, it might be expected that POT would be extended to the online environment. In practice, however, it appears that this development is inconsistent. Likewise, there has been little research into the experiences of those who deliver online teaching, with research focused more on the technological aspects than on teaching methodology. Using a document analysis of a sample of UK universities and interviews with academics to assess a cross section of current institutional practice, this paper explores the intersection between POT and the online delivery of teaching and learning. The findings indicate that POT has not yet become a standard evaluative and/or developmental process in e-learning environments, although some universities do implement it within their CPD (Continuous Professional Development) or teacher-training programmes.

Introduction

Peer observation of teaching (POT) in academic environments is a process undertaken for a variety of purposes, including staff development, quality monitoring, and staff promotion decisions (Gosling, 2005:5). The POT literature generally views it as a process that can benefit the professional development of lecturers and tutors (McKinnon, 2001; Gosling, 2002; Hammersley-Fletcher and Orsmond, 2005).

Gosling (2005:13) identifies three broad models of POT:

- An evaluation model based on a summative approach, aiming to assist managerial and personnel decisions or to comply with quality standards and to prepare for audits;
- A developmental model based on a formative approach, helping academic staff to improve their teaching practice and to qualify for fellowship or membership of professional bodies;
- A collaborative model based on a formative approach, aspiring to develop a community of practice for the improvement of teaching.

It is reported that a majority of universities use a combination of models (Gosling and O'Connor, 2009), with POT often deployed, following the recruitment of new lecturers, as a tool for evaluation during their probationary period. Many universities implement POT in cycles of one or two years for developmental purposes for all staff, using a collaborative model (Gosling, 2005). Others adopt a university-wide process, especially in the case of probationary lecturers, although others are organised on a departmental level.

Some concerns have been raised about the implementation of POT and the potential risks arising from the process. Gosling and O'Connor (2009:7) claim that "*many staff are ill-equipped, without further training to evaluate and provide feedback on the effectiveness of*

others' teaching". Shortland (2004) has suggested that staff often engage in POT in order to comply with institutional policies rather than through any real desire to improve their teaching practice. Peel (2005) questions whether making POT compulsory would reduce its potential for supporting individuality and empowerment. This is supported by other studies which argue that POT works best as a voluntary practice (Atkinson and Bolt, 2010).

The demands of delivering flexible online teaching to an international body of students has resulted in the recruitment of a workforce of largely hourly-paid 'associate' lecturers, who are willing and able to work from home, with unpredictable and often unsocial hours (Fazackerley, 2013). This effective 'outsourcing' of teaching, with its geographically-distributed and 'virtual' nature, means that both the monitoring of performance and ensuring of high standards of delivery are at the same time difficult to implement and easy to overlook. This author's experience in teaching distance learning (DL) programmes has indicated that peer observation of teaching is not undertaken regularly for lecturers and tutors involved in e-learning environments.

This research sought to investigate how peer observation of teaching is currently implemented in e-learning environments in UK universities, what criteria are appropriate to POT in such environments, whether digital/virtual environments constrain the POT process and what kind of guidelines or processes might be desirable and practicable for the implementation of POT in e-learning environments. As the research questions were focused upon the theories of understanding rather than explaining, and building rather than testing, an interpretative approach was adopted.

Although Swenson and Taylor (2014) affirm the teacher's role in delivery, they also highlight the fact that teachers are moving away from their traditional role as the sole source of information. Clearly, as online learning environments become more sophisticated over time, teachers need to adapt to new environments and to align their knowledge with the requisites of Learning Management Systems (LMS) (Hinson and LaPrairie, 2006; Connolly, Jones and Jones, 2007; Swenson and Taylor, 2014).

E-learning environments in HE (Higher Education) and POT

According to a survey on Virtual Learning Environment (VLE) use by the Universities and Colleges Information Systems Association (UCISA), 81% of universities in the UK used VLE.s in 2001, increasing to 95% by 2005. Since 2005, the increased variety of online technologies has been reflected in a broadening of the scope of the UCISA survey to include "*any online facility or system that directly supports learning and teaching*" (UCISA, 2014). This includes VLE.s, eLearning tools and Web 2.0 tools.

Various definitions of e-learning have tended to focus on the use of the internet for teaching and learning practice, although broader definitions include audio-videotapes, satellite broadcast, interactive TV and CD-ROM (Mason and Rennie, 2006). Within this learning context, the following modes can be identified:

- Online learning, requiring that the teaching takes place via the internet.
- Blended learning, combining face-to-face teaching with online teaching and learning methods.
- Distance learning, where students are not required to attend some or all on-site teaching or learning activities.

- Open learning, where the learner defines independently what, when and how to study without formal and compulsory classroom participation.

A 2013 paper from the Changing the Learning Landscape (CLL) partnership highlights major cultural issues that can act as barriers in the implementation of Technology-Enhanced Learning (TEL) strategies; it also points out that development of the digital literacy of stakeholders and institutional in-house collaboration are both important issues for a more uniform and consistent provision of e-learning tools (ALT, 2013). The rapid integration of digital technologies into university teaching has created both debate about and research into the role of teachers in e-learning. Goodyear *et al* (2001) define eight roles for teachers involved in online teaching, highlighting the role of 'technologist' as a new element. In addition, existing roles can be seen to change as a result of the online influence on the whole teaching environment. For example, the role of facilitator assumes a new dimension, with the internet producing an enormous amount of content and thus requiring the guidance of a teacher to enable learners to access the most relevant sources. Baran *et al* (2011) reviewed eleven key articles published since 2000 and examined online teacher roles and competencies. This study also emphasises the role of technologist.

Rogers (2013:231) also highlights another significant development, the 'reprofessionalization' of teachers working in the e-learning environment. This remark is pertinent in terms of the continuous professional development (CPD) of university teachers, as the extensive use of technology requires them to upgrade themselves continuously through appropriate training (Armellini and Jones, 2008).

In the context of the emergence of blended learning, Gosling (2014:18) argues that "*POT has to be radically reconsidered to accommodate this form of delivery*", suggesting a need to move to a model of peer review of teaching that is more flexible and more inclusive of the whole range of activities involved in designing, delivering and assessing teaching. However, in practice, the development of POT to accommodate the online environment appears to be patchy at best; for example, The Quality Assurance Agency for Higher Education (QAA) has never required POT to be used in the context of e-learning (Swinglehurst *et al*, 2008), which perhaps helps also to explain a relative lack of research in this area. McKenzie and Parker (2011) highlight this, whilst noting that many subjects in universities in English-speaking countries are now delivered in blended mode or online environments. Kraglund-Gauthier *et al* (2010) also point out that there has been little research into the experiences of teachers as they shift from face-to-face to online teaching, more research having been done on the technologies, methods and tools used in the online environment than on the delivery of teaching.

Bennett and Santy (2009:406) approach what they refer to as online peer observation (OLPO), from an action learning approach, "*aiming to exploit the flexibility of the internet and offer individuals a powerful source of support for their professional development.*" They argue that "*OLPO can be a window across boundaries of discipline, e-learning environment and mode of delivery...in an interdisciplinary, cross-technology, multi-cultural and global context.*"

Swinglehurst *et al* (2008:385) maintain that "*the role of the e-tutor extends beyond that of a designer of learning tasks and that in fact much (although not all) of an online teacher's behaviour is observable, although the limitations of such a focus stand.*" They created a

'Peer-to-peer Reflection on Pedagogical Practice' (PROP) model to implement in a web-based master's degree programme, focused upon six main themes, some of which are also common to face-to-face POT: anxieties provoked by POT; teaching reviewed as 'performance evaluation' leading to little learning; tensions inherent in the practice of POT; defining 'good' online teaching; redefining POT as collective 'sense-making'; the opportunity for innovation and collaboration. Their research went on to argue that effective implementation of POT in the online environment required: ensuring clarity of purpose; ensuring that the process remains 'true' to its purpose; moving away from conceptualising teaching as performance; fostering a team culture valuing critical discourse about teaching; ensuring protected time; exploiting the unique features of the online environment (e.g. the permanency of the record, the opportunity to expand POT beyond what is observed within the classroom, the opportunity to reflect on new conceptualisations of learning); fostering a climate of trust, mutual support, and ownership (Swinglehurst *et al*, 2008:390-91).

Bennett and Barp (2008) have investigated the implementation of POT in the online learning environment, and argue that "*many aspects of peer observation do not simply 'translate' directly online*", maintaining that "… *the flexibility of the online medium raises questions and forces decisions that do not have to be faced when working face-to-face, such as challenges concerning what is observed online, how the observation process is managed and structured and how to help participants maximise the new opportunities as they adapt to a context in which many lack the perspective as online learners*" (Bennett and Barp, 2008:568).

Bennett and Barp (2008:568) note that one issue particular to the nature of online learning concerns the difficulty of selecting and isolating a 'chunk' of learning and teaching activity to be the focus of online peer observation. Classroom-based peer observation typically involves an observer's attending a distinct 'lesson', whereas online courses are not necessarily organised in terms of 'lessons' and structuring observation may not be as straightforward as suggested by Tonkin and Baker (2003), who talk of replacing a 45-60 minute classroom observation by logging into the VLE a number of times over a week, on the basis that "*one week in Blackboard is equivalent to a week's worth of face-to-face class time*" (Tonkin and Baker, 2003:3). Bennett and Barp (2008:568) argue that the participants would work in an environment without the usual 'natural time boundaries' and this, in turn, would create a pressure on 'staff time'.

Bennett and Santy (2009:404) emphasise that "*Peer observation of the online learning/teaching process must not merely replicate the traditional use of peer observation of class-room teaching but capitalise on the additional opportunities it offers.*" Beckton and Penney (2011:12) argue that the POT process could be an effective way for educational developers to reach more staff for development purposes.

As Bennett and Barp (2008:559) point out, there is a wide range of issues that require further research in the context of online POT, such as teacher/learner rights within online observation, the role of the emerging e-pedagogy and patterns of student learning in the online context. Indeed, they question the very appropriateness of peer observation as a tool for CPD within the online context. However, they conclude that "*as the use of online and blended learning continues to expand and as, almost inevitably, online peer observation gains greater prominence within the HE sector, it will be important to expand such investigation in order to explore the strategies which can be employed to overcome such*

challenges and/or exploit new opportunities, to identify key aspects that influence the effectiveness of peer observation online and to complement good practice already established for classroom-based peer observation" Bennett and Barp (2008:568-9).

Methodology for the analysis of university documents

In order to ascertain the extent and nature of POT implementation, with particular reference to the online environment, a review of documents and webpages of UK universities was undertaken. Documents on POT were assessed against a number of criteria, including: whether they were available online, whether they referred to POT in e-learning environments and whether POT procedures had been developed by the university itself or adapted from other universities.

Via the Higher Education Statistics Agency (HESA) and Universities UK websites, a total of 130 universities were identified. Of these, 103 university websites were consulted in more detail, in two stages. In the first stage, three key phrases were used to identify relevant webpages and documents:

1. Peer Observation of Teaching
2. Academic Development
3. Learning and Teaching Strategy

In the second stage, when POT-related documents were gathered, a search within the documents was made using the phrase 'Technology Enhanced Learning', in order to gain more insight into the HEI's relevant strategies.

It was decided to undertake further analysis on twenty per cent (twenty) of the universities, selected randomly, on the basis that this would constitute a significant sample of the whole.

Analysis of university documents

The main objective of the analysis was to determine the extent to which POT was implemented within university environments, with subsidiary criteria aimed at identifying whether POT was included in the university's Teaching and Learning Strategy documents, how the e-learning environment was promoted at the university, and whether the online environment was included as part of the POT process. One criterion addressed whether the Higher Education Academy (HEA) fellowship was cited, on the basis that this would be an important measure in understanding how committed the university was to the UK Professional Standards Framework (UKPSF). Also, as postgraduate programmes in academic development, which aim for academic staff to obtain the HEA fellowship, incorporate the process of POT in their syllabus, it was felt to be important to identify whether the Postgraduate Certificate in Higher Education programmes were voluntary or compulsory in these institutions as well.

The analysis of the sample list of universities indicates that seventeen out of twenty had policies for POT that were available via their webpages. However, only half of the universities had the relevant POT forms available publicly on their website, with some explicitly indicating that they were limited to staff access on that institution's intranet.

Teaching and Learning or Teaching, Learning and Assessment Strategies were publicly available for eleven out of twenty universities. However, none of these documents, where

they were available, included POT explicitly, although some mentioned peer review or peer mentoring. For example, the University of Wolverhampton noted its aim to "*Develop academic and professional communities of practice for example, through supportive and developmental peer review and reflection in order to increase the systematic dissemination and embedding of good practice in learning and teaching and related subject and pedagogical research*" (University of Wolverhampton, 2013). However, many such documents appeared to be aimed more at current and prospective students than staff.

Twelve out of twenty universities indicated a centralised department that oversaw the implementation of POT and seven of the universities in the sample claimed that they had recently (2010-2013) reviewed their POT processes. Where stated, most universities (twelve out of fourteen) intended POT to cover all academic staff, whilst two focused on new staff or those in their probationary period. All of the universities that mentioned frequency of POT implementation (twelve out of twenty) implemented POT annually or bi-annually, therefore indicating that it was implemented as a cyclical, continuous procedure. Most universities appeared to apply POT as a university-wide policy; however, at the same time, it was clear that in many cases schools and departments could adapt university-wide guidelines to their individual requirements. For example, the University of Bedfordshire advised that "*The Peer Support of teaching scheme…operates in all academic departments. The precise nature of its implementation will be determined by your department but it must consist of two instances of activity for full time staff and one instance of activity for part time staff*" (University of Bedfordshire, 2014).

Most universities generally cited the HEA as a source of literature and further information on POT, with a couple referring to other UK or foreign universities. For example, the University of Hull stated that "*Some of the forms used in this site are based on those produced by the Universities of Birmingham and St Andrews and we wish to acknowledge their cooperation*" (University of Hull, 2014). The University of Leicester directed staff to a link to 'How to do Peer Review of Teaching', from the University of Macquarie in Australia, as well as to the Teaching and Learning Portal at University College, London (University of Leicester, 2014).

Only five universities out of twenty made direct reference to online activities as part of their POT process. Two of these had POT forms specifically designed for e-learning/teaching, one had a dedicated page describing an e-tutoring scenario for peer review and the other two mentioned virtual learning environments in their POT guide. The University of Bedfordshire guidelines noted that "*For full time staff, one peer supported activity must involve a typical classroom-based session with consideration of associated BREO unit site materials/activities. The second peer supported activity is negotiable and could emanate from a range of possibilities e.g. unit design, classroom or online learning activity, assessment design or activity*" (University of Bedfordshire, 2012). The University of Leicester noted that its POT scheme "*operates for all teaching staff (both on campus and distance learning)*" and it included a separate e-learning form (University of Leicester, 2014).

Four of the universities in the sample were seen to have adopted wider Peer Review/Support schemes with the aim of covering a broader range of academic support and development issues, although the schemes varied in their focus and aims. For example, the University of Bath's Peer Review of Teaching scheme *"aims to enhance the student learning experience and enable lecturers to teach and facilitate learning even more effectively…Peer review differs from teaching observations which are more narrowly focused on 'observable*

teaching events'. Instead, it aims to give feedback that: moves beyond teaching style and delivery, is more specific and meaningful, offers greater challenge or provides new insights, is less linked to evaluative observations of probationary staff" (Exley, 2014). Similarly, at the University of Cardiff, "*Peer Review of Learning and Teaching (PRLT) is a pan-University activity for all staff whose role directly impacts on the student learning experience. It is an opportunity for staff to take part in an annual, scholarly, peer-assisted reflection on the breadth of their teaching/learning support practice. PRLT considers both professional development and commitment to the enhancement of the student experience, and goes beyond classroom observation to cover all aspects of learning and teaching practice*" (University of Cardiff, 2013).

All the universities that implemented POT confirmed that the procedure was part of their academic development/CPD, and were keen to emphasise the developmental nature of the process, with the School of Oriental and African Studies (SOAS) Guidelines, for example, emphasising that "*the introduction of POT at SOAS is not for judgemental or assessment purposes, but will follow a Continuing Professional Development (CPD) approach whereby constructive mutual feedback from trusted colleagues supports the sharing of good practice*" (SOAS, date unavailable).

None of the universities in the sample had any Technology Enhanced Learning strategy in their websites. However, several universities had dedicated e-learning/online learning pages. One, (the University of Wolverhampton) had two guides referring to TEL and Blended e-learning.

All but three universities endorsed HEA fellowship on their website. All except one university cited a Postgraduate Certificate in Higher Education programme. Most universities offered these certificate courses on voluntary basis to all staff, but seven made it mandatory for new lecturers or probationary lecturers.

The analysis of university webpages and documents points to a number of tentative conclusions. Firstly, the implementation of POT processes appears to be fairly ubiquitous in UK universities, with most institutions implementing it as a formal procedure on a university-wide basis. However, they tend to be at pains to emphasise that it is a developmental rather than a judgemental process and, where it is mandatory, this tends to be only for newer staff and those on probation. Moreover, the actual implementation of POT tends to allow departments and individual academics a good deal of freedom to interpret the guidelines as they see fit, again avoiding claims of heavy-handedness, with flexibility around the frequency and nature of observation, and also the nature of the activities being observed.

This flexibility tends to lead to vagueness in the guidelines concerning the nature of activities to be observed, with classroom observation seen as the key area for observation, but little clarity on what else does and does not count as a teaching/learning activity. Some guidelines mention e-learning environments as areas that could be covered, but few go as far as the University of Leicester in providing specific forms for the e-learning environment.

The analysis shows that the Postgraduate Certificate in Higher Education has become the norm amongst UK universities, especially for new lecturers, and it is clear that this is a route through which participants are exposed to POT in various environments, including e-learning.

Finally, in a few universities it can be seen that POT is becoming a part of wider Peer Review or Support schemes. Such schemes are keen to demonstrate that they are not about expanding central observation, but rather an extension of the developmental nature of peer assessment, and a further move away from the box ticking procedures of the past (Shortland, 2004: 224).

Methodology for interviews

In order to explore the approach and opinions of a variety of stakeholders involved in the POT process in UK universities, a selected group of academic staff was interviewed, using a semi-structured approach. In order to obtain participants for the interviews, an initial request was sent via an exploratory e-mail to individuals selected from the current Staff and Educational Development Association (SEDA) Jisc mail list, to participants of a HEA workshop which the researcher attended in 2013 and to colleagues from various institutions for which the researcher had carried out work. A total of fifty-nine individuals were sent invitations, which resulted in nine interviews conducted in total. The majority of the interviewees were working or had worked in academic development or related roles. All had teaching experience in the UK and only one of them had not been exposed fully to a VLE environment as he had retired before VLE became mainstream. However, this participant had worked for the distance learning programmes of a UK HEI, so his input was considered to be relevant.

Analysis of interviews

The questions were grouped in order to cater to different categories of academic staff; they were also focused on two core topics: continuous professional development (CPD) and peer observation of teaching (POT). This focus aimed to explore how POT fits into current CPD schemes available in universities.

The interview process revealed that each participant had her/his own unique experience of the topic. However, there were some recurrent themes. One key theme emerging from the interviews was the use of technology and the rapid rise of e-learning environments. With regard to POT, subjects with considerable relevant experience (twenty years and over) mentioned the QAA Subject Review and the compulsory evaluative implementation of POT, whilst those with less than twenty years' experience focused on the developmental POT model.

Almost all participants had experienced POT as observer or observee, indicating that it is a standard procedure in universities. The one participant who had never experienced POT noted that, as her job was largely administrative, it fell outside academic practice.

All participants agreed that e-learning had developed rapidly and that it has now become mainstream; as one participant remarked, it is regarded as "*the way forward*" (PRT1). The academic developers within the interview participants noted that e-learning serves to meet increased demand for higher education, but that the pressing challenge now is "*mainstreaming the uses of technology into skills training*" (PRT3). Regarding the incorporation of e-learning within CPD, participants generally noted that their institutions provide training on e-learning through postgraduate certificate programmes. One participant confirmed that they were designing a specific programme for distance and blended learning, as their institution's share of distance learning programmes was growing rapidly (PRT1).

However, another participant revealed that their institution had wound up its first certificate programme in e-learning a few years previously (PRT4). All the institutions mentioned by the participants provided some e-learning training within their CPD schemes, whether as postgraduate certificate programmes or specific training to implement new technologies, such as a new VLE. One participant believed that institutional vision could encourage lecturers to be more innovative in the use of technology as part of the Technology Enhanced Learning strategy (PRT3). This consideration was also highlighted by the 2013 paper published as part of the CLL partnership (ALT, 2013).

Individual experience of POT

The responses about peer observation of teaching revealed that almost all of the respondents (eight out of nine) had undertaken it, with all of those having participated both as observer and observee. One participant regarded himself as a "*peer observation enthusiast*", asserting that he learned more by observing others than "*from articles and research*" (PRT1), however, another respondent admitted to being "*...not too keen on peer observation of teaching*" (PRT2). The one respondent with no exposure to POT managed a professional development programme for practitioners and believed that her "*mentoring*" of distance learning tutors amounted partially to a POT process (PRT5).

A common characteristic of respondents was that the POT schemes implemented were developmental in nature. However, a participant who had experienced POT first through the QAA Subject Review noted that it had created an environment of mistrust and partiality, owing to institutional, departmental or even political rivalries (PRT2), as also confirmed in the literature by Gosling and O'Connor (2009), Gosling, (2005), Allen (2002) and Cosh (1998).

From the point of view of the observee, one of the participants claimed that the POT process allows teachers to become "*less inhibited and freer to teach in their own personal style*" (PRT1). Another emphasised the benefits from both pedagogical and practical points of view: "*the benefits are that when we did the observations we would have somebody who'd be an academic but we'd also use somebody who would be an e-learning technologist…There's so many things that having peer assessment helps with both from an academic and a technology perspective so that's why we use the two*" (PRT9)

An interesting common comment concerned the extent to which the observers themselves benefited from the process. Respondent PRT6 maintained that "*the benefits are stronger for being observer*", and PRT1 claimed that "*watch[ing] the class interactions gives you a three dimensional view of educational experiences."* These comments accord with literature which emphasises the beneficial aspects of POT schemes (Gosling, 2014; Bell and Cooper, 2013).

In terms of the potential disadvantages of the POT experience, participants cited concerns for its use as an evaluative or HR tool: "*I think as long as you don't get threatened by the process if it is not graded if again it is just discussion and then you can get a lot from it*" (PRT7). There was also a concern about feeling judged: "*it becomes much more personal observation of personal style and personality so it becomes quite challenging and that and you know people can be quite defensive*". (PRT5) One participant felt that the value of POT was limited: "*the intention is quality control but…it is a formal procedure only. After certain years it does not benefit as one develops its own best teaching way…once the quality of*

lecturing or teaching reaches to an acceptable level the extra effort could be very marginal" (PRT6).

Institutional POT environment

Whilst most participants confirmed that the objective of the POT processes that they had undertaken was developmental, one participant noted that, in the Further Education (FE) environment, it is still regarded as a managerial procedure and is compulsory. However, she also claimed that, in practice, "*you pretend to do it*", therefore reducing POT to a box-ticking exercise (PRT7), as affirmed by Shortland (2004), asserting that staff take part in POT exercises at least in part to comply with institutional policies.

Four participants confirmed that POT was established on an institutional level in their workplace (PRT3, PRT8, PRT7, PRT5). Two respondents stated that their institution had not adopted a formal POT procedure at the institutional level (PRT4, PRT1), so the experience of these participants was based on their own departmental frameworks or on the postgraduate programmes or teacher training programmes their institutions offered. One participant noted that in their institution there was "*stiff resistance to POT*", owing both to a conservative staff approach and also to the fear that it might develop into an evaluative scheme (PRT1). The second participant, however, did note that their university had recently adopted formal POT guidelines and that the academic development team was currently developing a new developmental scheme for various departments (PRT4). The management of the POT process has been covered by Hammersley-Fletcher and Orsmond (2004), Lomas and Kinchin (2006), and McMahon *et al* (2007). These authors suggest that balancing anxieties and concerns while emphasising the importance of the process may actually reverse negative attitudes towards the POT process.

In terms of the application of POT to the online environment, only two participants had any experience of this, and then rather in the context of the recording of live teaching than monitoring of online teaching as such, although one participant noted that some of their students would be delivering distance learning exclusively, so that observation would need to be undertaken on that basis (PRT8). Both of the academic developers who ran teacher-training programmes as distance learning courses had undertaken such monitoring with their international partner institutions for quality assurance purposes. Their focus was on logistical and technical issues, and a concern to adopt a systematic approach to assessment in a range of circumstances, rather than any belief that POT in the online environment required a fundamentally different approach (PRT8, PRT4). However, one participant had recently attended a training session at Edge Hill University, where "*they have developed a very interesting instrument for collecting pre-observation information, and they had a systematic model of peer observation of teaching. Interestingly it was not very different from a general phenomenographic approach to peer observation so there was a lot of alignment with our practice but we have not put in a box for online use yet*" (PRT8). In terms of potential issues of online POT, one participant highlighted technical problems, such as lines being down, but felt that the fundamental problem with adoption was lack of internal support: "*It is a nice model but it could well need a lot of support for doing that, that is why we did not go with it*" (PRT4). McKenzie and McCallie, in Baker *et al* (2006), emphasise the need for such support.

The implementation of POT in e-learning environments appears to be a very immature phenomenon, even for academic developers. One participant concluded that POT "*should be a natural part of teaching…like reflective practice*", but predicted that it would take "*five to ten years*" for POT become an embedded part of the academic world as a developmental process (PRT1), a view shared by Bennett and Barp (2008).

Conclusions

In terms of the application of POT as a general process, institutional policies and centralised frameworks/guidelines are prevalent and these are assumed to cover all learning environments, including e-learning. Whilst there are guidelines and forms for e-learning modes in some cases, the pedagogical or the phenomenographic foundations tend to be assumed to be the same, as confirmed by interviewees. This directly contradicts the recommendations in the literature - for example, Bennett and Barp (2008). The objective of implementing POT in general is mainly the evaluation of teaching and personal development, and this is also valid for applications in e-learning environments. However, as stated by the interviewees, the application of POT in e-learning environments is sometimes limited to teacher training or PG Cert. programmes. Non-implementation of POT in certain universities appears in some cases to stem from previous evaluative applications, which created a resistance to and mistrust in the process, or alternatively from the university's focus on research rather than teaching, as mentioned. These negative aspects have been noted by various authors in the literature (Allen, 2002; Chism, 2007; Gosling and O'Connor, 2009; Shortland, 2010). However, it would be difficult to apply these statements generally across the whole of the UK HE sector.

The application of POT in the e-learning environment can be seen to cover all kinds of online synchronous and asynchronous activities in distance learning, online learning and blended learning programmes. Feedback on online POT, according to the analyses of university documents, tends to be given in written form, as there are institutional forms to fill in, but they also include an oral component, relating to either pre- or post-observation discussion. The existing limited literature on the subject seems to bear this out (Gosling, 2014; Swinglehurst, 2008). POT is generally considered in a positive light, according to both the relevant literature (Bennett and Barp, 2008; Beckton and Penney, 2011; Harper and Nicolson, 2012) and the interviews and analysis of university documents. POT in e-learning environments is also deemed to make a positive contribution.

Some of the more negative comments made by the interviewees have helped to address the secondary research question, which focused on the limiting effects of digital/virtual environments. Technical problems were mentioned by the interviewees, as well as bureaucratic aspects. These barriers have been discussed by Bennett and Barp (2008) and also by Tonkin and Baker (2003).

It was not possible to identify specific guidelines or processes for e-learning environments. However, the information obtained through these data sources strongly suggests that POT in general terms in the UK context is acceptable by staff only if applied for developmental purposes. Moreover, as confirmed in the literature, (Gosling, 2005; Hammersley-Fletcher and Orsmond, 2005; Allen, 2012), an institutional drive for implementation is required, together with institutional understanding that the process needs to avoid being a burden on staff, especially in the context of distance learning teaching undertaken by part-time or

atypical staff. Additionally, in terms of requirements for quality control, there is a need for maintenance of evidence in the e-learning environments.

Overall, the study indicated that the application of POT in e-learning environments is not yet fully developed. Whilst the sample cohort included in the study cannot be seen to be representative of the UK HE sector as a whole, it does provide an insight into current practice. Although implementation of POT in e-learning environments is developing slowly, academic developers and academic development centres in the universities tend to believe that the pedagogy underlying it should be the same as for classroom-based POT. However, they also acknowledge that implementation needs to accommodate the characteristics of the digital technologies employed in delivery. Future research on this subject should examine various technologies and their impact on the POT process. E-learning environments currently create technical barriers and also make many academics nervous, as they constitute a novel vehicle for teaching. Moreover, they are also a source of concern for administration, as maintenance of evidence is seen as problematic. In the light of the recently proposed Teaching Excellence Framework (TEF), QAA's response to the Green Paper affirms that the coverage of such frameworks should go "*beyond teaching and look into broader aspects of learning environment and assessment processes*", thus broadening the scope to include e-learning environments (QAA,2016:6). In this context, it is important to note that some academics view the POT as a snapshot in time rather than as a long-term evaluation tool, as one reader of Derfel Owen's blog on the Times Higher Education website remarked (Owen, 2015). However, the Vice-Chancellor of the University of Hertfordshire, Quintin McKellar, supports "*the class observation as the way for the academics who would seek promotion on the basis of their teaching*" (Grove and King, 2015). Therefore the proposed TEF seems to have started a fresh debate about POT in terms of measuring teaching quality and the skills offered by academics.

Further research is needed on this subject both at macro and micro level. At the macro level, a more comprehensive survey of policy and implementation in UK HEI.s would be valuable. At the micro level, in-depth case studies of implementations of POT e-learning environments could be carried out at university level, or comparative studies undertaken of the application of POT in e-learning environments in selected UK universities. Such studies could attempt to build up empirical evidence as to whether POT really can deliver better teaching in the online environment, and also assemble detailed guidelines for its implementation, taking into consideration the pedagogical implications of the differences between online and face-to-face teaching, as suggested in the literature. Finally, owing to the 'reprofessionalization' of teachers engaging in e-learning environments, as suggested by Rogers (2013:231), it would also be worthwhile to research POT processes in terms of promoting 'best practice' among colleagues. This would also look into teaching quality, as the proposed TEF seeks to embrace a wider learning environment than on-campus teaching. Since existing literature does not focus on how POT contributes to the development of skills in virtual environments, it would be valuable to focus on, for example, communication skills or management of intercultural contexts in virtual environments, and on how POT can identify development opportunities in order to enhance the learning experience of a diverse and global student cohort.

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The BCS Appathon Challenge at Greenwich

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Abstract

The BCS Appathon set out to engage during one hour as many people as possible in the UK in programming an app for their mobile phones. It took place on the 9th June 2015, between 10.30 and 11.30, at a number of UK venues, one of which was the University of Greenwich.

Many people now rely on their mobile phones and, daily, use a variety of apps on them, but few have any knowledge of how an app has been developed. The Appathon aimed not merely to give participants an understanding of app development - its ambitious aim was to get participants to create their own simple app during a one-hour, highly-interactive workshop. The workshop then continued on into the afternoon, allowing Appathon attendees to work individually or in small groups, developing apps of their own design. In the concluding session, participants had the opportunity to present their apps in a recorded show-and-tell activity. The apps developed ranged from simple games to such novel applications as an app to count the number of revolutions completed by a figure skater.

The success of the Appathon has encouraged staff in the Department of Computing and Information Sciences at Greenwich to consider how it could be deployed to first-year students, who, although they may well be active smart phone users, may also find programming difficult and lack confidence when starting to learn how to do it. We are also investigating how the Appathon can be used to engage students in schools and develop their interest in studying Computer and Information Sciences. By putting first-year students through the Appathon experience, we hope to create a large pool of student ambassadors who can work with us in taking the Appathon to local schools and using it as a taster event at our open days.

Introduction and Background

The BCS, The Chartered Institute for IT, has the goal of making IT good for society. The Royal Charter of the BCS defines one of its objectives: "to promote the study and practice of Computing and to advance knowledge and education therein for the benefit of the public" (BCS Royal Charter, 1984). Within the remit, BCSWomen, the specialist group for women members of the BCS, decided to hold workshops throughout the UK to give the public an insight into how the apps on their smart phones had been developed and to get them programming a simple app. Thus the BCS Appathon was conceived by members of BCSWomen. It grew from planning a workshop as a simple family fun day of programming to an effort to run, throughout the UK, simultaneous workshops, called Appathons, and to attempt to establish a Guinness World Record for "Most number of people simultaneously learning to code across multiple sites" [World record attempt: Ref. No. BCSWomen 150227123013mnop].

All of the learning materials used at the Appathon workshop were developed to get people with little or no programming experience developing Mobile phone apps. The first BCSWomen mobile programming workshop was developed by Dr Hannah Dee and Dr

Karen Petrie. Dr Dee later refined and developed the workshop's resources and has made them available on the web. As all her materials have been released under a Creative Commons license, they are freely available (Dee, 2015a). In addition, in preparation for the BCS Appathon, she also prepared a number of associated 'Train the Trainer' videos and exercises for people leading the workshops at each Appathon site (Dee, 2015b).

On the 9th June 2015, over thirty sites took part in the BCS Appathon and the University of Greenwich was one of the largest, with over fifty people participating there. A video of the one-hour long lesson which started off the Appathon at Greenwich is available (Video Record, 2015); this was a requirement as evidence for the world record attempt.

The Appathon Lesson Plan and its Delivery: the Big Meow

The delivery of the official record attempt part was guided by a single lesson plan as well as a slide deck and an official BCSWomen AppInventor workshop handout (Dee, 2015c). All participants were given a USB containing the resources needed for the workshop. During the lesson, everyone had access to a laptop, tablet or smart phone, on which they could run the necessary software from a web browser to develop their app. The software used was MIT App Inventor (MIT App Inventor 'About Us', 2015). The development of App Inventor was co-led by Professor Hal Abelson of MIT and Mark Friedman of Google in 2009. Other early women engineers from Google contributing to its development were Sharon Perl, Liz Looney and Ellen Spertus. App Inventor is easily accessible as a web service from MIT's Center for Mobile Learning. An ancestor of App Inventor is Scratch, which also uses a simple visual drag-and-drop approach to build up programs (Scratch). App Inventor's authors claim that its "simple graphical interface grants even an inexperienced novice the ability to create a basic, fully functional app within an hour or less". Certainly there is ample evidence for this claim, provided by number of people who took part successfully in the BCS Appathon. At the heart of the App Inventor project is a constructivist approach to education, as it seeks to help people move from being mere consumers of technology to be becoming creators of technology.

The official lesson plan covered the first hour and introduced people to the Android system and App Inventor by taking them through a simple exercise to develop an app. Using App Inventor and working individually or in pairs, participants designed the visual frontend of their app, by placing a button on the screen of the app and uploading a picture of cat to the button. They then attached a sound to the screen and associated a cat sound to it. (Figure 1 below illustrates a screen developed and shows the AppInventor Designer mode.) At this point, the appearance of the app was complete and all that remained was for the underlying code to be developed. In conventional software development, the interface to the user and the program's underlying logic are coded together in the same high-level language. By separating these two aspects of development, AppInventor supports a separation of concerns between what the users see and what goes on behind the screens, making it easier for novice programmers to develop applications. In AppInventor, an app may have several interconnected screens and each screen will have blocks of code associated with it.

The next step was to code the app using the simple visual programming blocks. The instructor took participants through this process step by step. The simple program was event-driven and consisted of the block illustrated in the screen shot in Figure 2 below, taken

from App Inventor in the Blocks mode. Together, these two figures give a complete picture of the app that was developed during the lesson.

Figure 1: Cat Button Screen in Designer

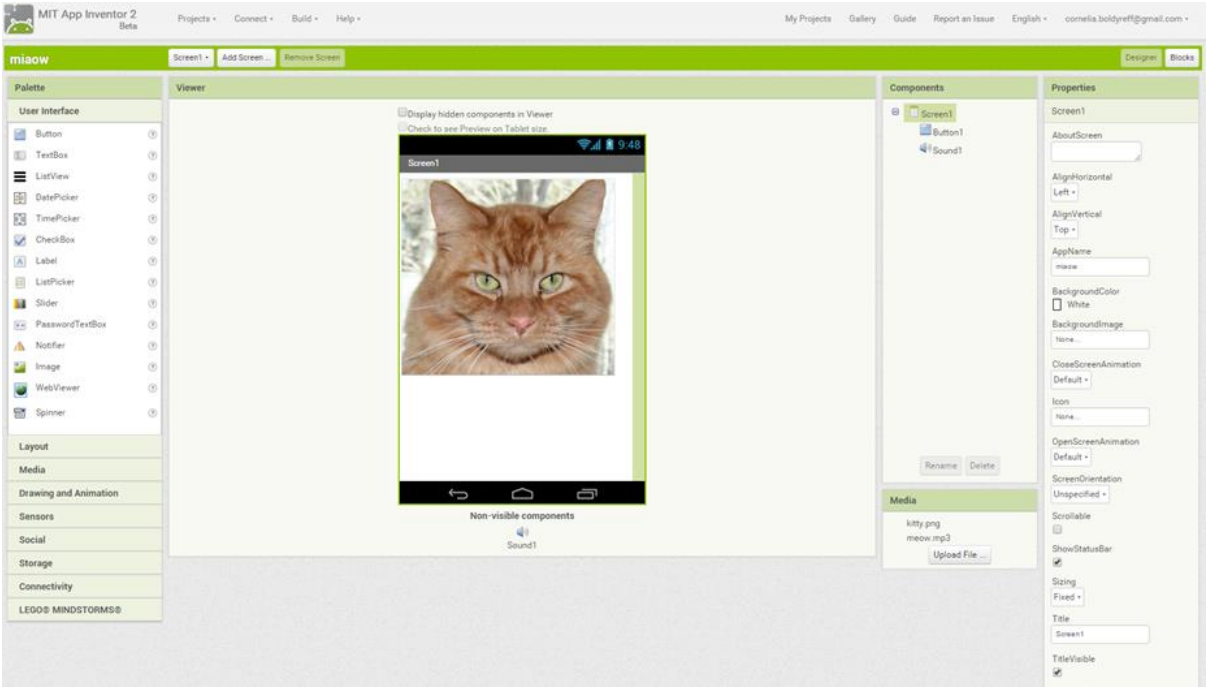
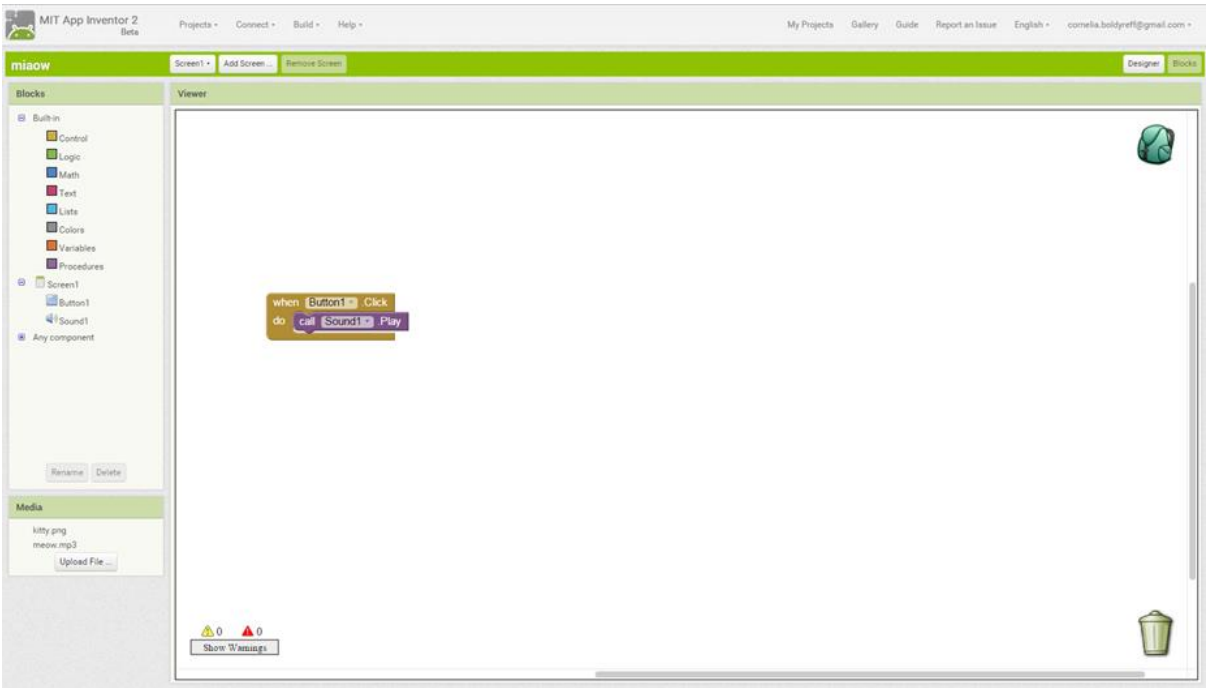


Figure 2: Code Block in Blocks



Finally, participants were in a position to build and download their apps to their phones or tablets and test them. The lesson covered how to do this and, for those without an Android device, an Android phone simulator was made available. At this point, as apps were successfully downloaded, the classroom began to fill with the sound of cats meowing. More adventurous students quickly began to adapt their programs, using different animal images and sounds provided on the USB Appathon resource sticks that all participants had received.

At the University of Greenwich, comprising the just over fifty people who took part were students, staff, families and members of the general public. The age of the participants ranged from six to the late sixties. The Appathon was open to all. The principal organisers and helpers were all members of university staff from the Department of Computer and Information Sciences. There were also independent witnesses and monitors present as the Appathon at Greenwich was part of the wider initiative to set a Guinness World Record. Throughout the UK during the Appathon, the same lesson plan and slides were employed to deliver the workshop. At each site, an official video recording of the proceedings was made and official photographs were taken.

As the lesson at Greenwich took place in a classroom with students seated in rows of desks, there was plenty of opportunity for participants to work together in pairs or small groups. Parents and children sitting together were able to learn together. Many children and adults were observed coding together throughout the lesson and workshop sessions that followed. It could be argued that the mixed ages of participants was a positive advantage, allowing them to learn from each other as well as from the instructor and official helpers.

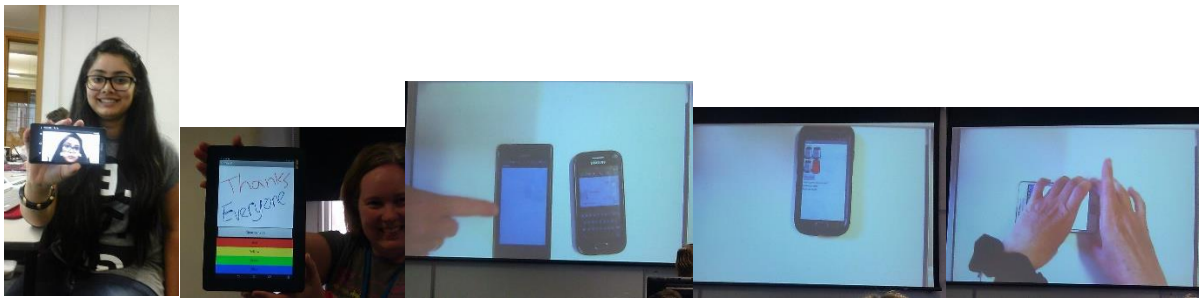
The lesson concluded with a massive Meow-athon as the final whistle was blown, signalling the end of official lesson and its recording for the world record attempt. This can be heard on the video.

What came next: Apps developed on the day at Greenwich

The workshop continued until late afternoon. There was a lunch break, although some participants had brought food with them and, such was their enthusiasm once they got started, they continued working throughout lunch on their own app developments. Helpers were available throughout the workshop to assist participants with any problems and help them with their developments.

The apps developed during the later workshop sessions were quite varied. The workshop ended with a show-and-tell session, during which people presented the apps that they had been producing. The photographs below in Figure 3 illustrate the range of apps created on the day: drawing apps, a phone-to-phone messaging app, a thimble game and an app to count revolutions for figure skaters.

Figure 3: Apps developed at Greenwich



The success of the event at Greenwich was evident from both the formal and informal responses we got on the day and after the event; for example, the participant who developed the app for skaters remarked in an email after the event:

"*I was very impressed by the range of different apps people came up with – it shows how much you can do (and how far we've come since the days of punch cards! ;-)).*

"I've noticed the database facility in App Inventor, which will be handy when I come to calculating average/max no of spins and spinning speeds ☺

I'm going skating tonight so I'll do a test of my app." (quoted with permission from the respondent).

Nationwide, over 1000 people took part in the Appathon, so we at Greenwich were happy to have our fifty participants included in the count towards the official world record (Computer Weekly, June 2015).

Future Plans to take the Appathon to schools with student support

The success of the Appathon has encouraged staff in the department to think of how it could be deployed to first-year students, who, although they may well be active smart phone users, may also find programming difficult and lack confidence when starting to learn how to do it. We are also investigating how the Appathon can be used to engage students in schools and develop their interest in studying Computer and Information Sciences. By putting first-year students through the Appathon experience, we hope to create a large pool of student ambassadors who can work with us in taking the Appathon to local schools and using it as a taster event at our open days.

Although many students have done some programming prior to joining the Computer and Information Systems (CIS) Department, few claim to be confident programmers; in a survey of all first-year students at the start of the academic year 2015-16, Malik and Wicks found that although 74.9% had done programming before coming to university, only 3.4% claimed to be confident programmers (unpublished data). All students on the department's degree programmes study programming in their first year; it is a challenge that many first years find very difficult and, in CIS, one member of staff has produced a very popular series of videos for students entitled: Why is programming hard? (Wicks, 2014).

In our recently-started project, working with GreenwichConnect (Greenwich Connect Blog), we plan to investigate whether we can kickstart students' enthusiasm for programming by using the one-day Appathon material, suitably adapted. We envisage that, following the Appathon experience, the student teams formed to develop apps will not only build individual members' confidence to tackle the programming module in the first year, but also provide a cohort of supportive peers. To encourage student teams beyond the first workshop, we intend to support them to submit their apps to the App Store and, at the end of first year, we shall offer prizes, based on user feedback and numbers of downloads recorded online, for the most popular apps. This competition will be linked to our formation of the Greenwich University student chapter of the BCS, which all students will be encouraged to join in their first year. Membership of a professional society will contribute to students' employability, giving them entry into the leading chartered institute for IT professionals in the UK (BCS Student Chapters).

To support students, Andy Wick's videos will be adapted by the project team and additional material on team working in app development will be introduced. Experience and evidence of working in teams is a positive factor when students seek employment, as many of our students do during their studies; relevant programming experience enables students to take on technical work related to their studies.

With the assistance from a Greenwich Connect learning technologist, we shall be developing online support for our student teams to work collaboratively throughout the year in an activity which will be essentially extra-curricular; nevertheless, we hope it will enable them individually to pass their first-year programming module, to gain experience of working in teams (something required by course work in other modules) and prepare them for their professional work in the future.

We are also investigating how the Appathon can be used to engage students in schools and develop their interest in studying Computer and Information Sciences. By putting first-year students through the Appathon experience, we hope to create a large pool of student ambassadors who can work with us in taking the Appathon to local schools and using it as a taster event at our open days.

Conclusions

The success of the BCS Appathon at Greenwich has inspired us to aim at giving all our first-year students a chance to experience the challenge of the Appathon and the thrill of creating their own apps. Of course, the dream of many Computer and Information Sciences students, once they become app developers, is to create a killer app and make their fortune. Though that may not be possible for every student learning to create an app with App Inventor, it is the case that, through the Appathon experience, many more people have gained a better understanding of apps and of the digital technology that is shaping our world today. Our students will have the potential to be in vanguard of the Digital Revolution.

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Movies in the Classroom: Lessons for Curriculum Design

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Trailer

Public health is considered to be both a science and an art (Winslow, 1920; Faculty of Public Health, 2010), in which we seek to protect, improve and promote human health and enhance quality of life. It is a wide-ranging discipline, encompassing a broad mix of practitioners who work across a variety of organisational settings, and draws from science, technology, social sciences and law. Leadership, too, is often described as an art (Depree, 1989; Schein, 2005; Hodges, 2015) and as a field of study "draws on both the arts and the sciences" (Gill, 2006, p. 5). However, the word 'art' is frequently used indiscriminately and also ambiguously; it is a word that we often associate with the humanities, yet there has been relatively little discussion of how both public health and leadership, as subjects of study, are informed by the humanities. In what ways can the humanities, here largely defined as a collection of academic disciplines that include literature, drama and film, be used to enhance the learning of those practising, or seeking to practise, in the fields of public health and leadership?

There is a burgeoning body of literature (Johnson and Jackson 2005; Cornett, 2006; Jensen and Curtis, 2008; Smith, 2009; Edwards *et al*, 2015) which suggests that, by incorporating into our teaching the humanities, including film, we can enhance the learning experience of our students and help lay the foundations for greater sensitivity, understanding and empathy, as well as make the learning more 'real'. In medicine, too, there has been growing interest in the use of the humanities to enhance medical training (Cassell, 1984; Sklar *et al*, 2002; Shapiro and Rucker, 2003; Blasco *et al*, 2005), with much of the literature suggesting that exposure can help make those who practise medicine more empathetic, understanding and thoughtful in their work. Why not, then, explore how this might be incorporated into the teaching of public health and leadership?

In this short paper, we reflect briefly on an initiative, developed in the Faculty of Education and Health at the University of Greenwich, in which cinema is used to supplement teaching and augment the learning of public health, wellbeing and leadership students. We look at one film in particular to demonstrate how it enhances traditional classroom-based teaching.

Pitching the Screenplay

Why cinema in particular? We live in an age in which film, television and other visual media predominate. Visual images take centre stage in the news, advertising, entertainment and even education. Students spend a significant amount of their time in front of the small or big screen and are therefore more responsive, it is argued, to audio-visual stimuli than traditional, written forms of communication (Spielberger and Lieberman, 1985). This poses a challenge in higher education, where most learning materials are still in written form. How then can we, as educators, make our teaching more meaningful and relevant, whilst developing students' critical thinking skills? One possible strategy is to use carefully-selected feature films as part of the teaching and learning curriculum.

Over the last twenty or so years, educators across a wide range of disciplines - psychology, counselling, leadership, nursing, science, fine arts - have recognised the pedagogic value of films in teaching and learning (Tipton and Tiemann, 1993; Bluestone, 2000; Kuzma and Haney, 2001; Masters, 2005; Marcus and Stoddard, 2007; Capar, 2012; Gallagher, Wilson and Jaine, 2014). They are an excellent vehicle for illustrating course content and making sense of abstract theories and concepts (Hannay and Venne, 2012), whilst promoting critical thinking, stimulating the senses and engaging emotions. According to Champoux (1999), feature films have an audio-visual impact that gives them a distinct advantage over the printed or spoken word and "cinema's ability to create a unique experience gives it unbeatable power as a teaching tool" (p. 207).

Roll Camera … Action!

At a learning, teaching and assessment conference held at the University of Greenwich in January 2015, the authors conducted a short workshop in which they shared with participants two approaches to using film to supplement teaching and enhance learning:

- The first involves use of an extra-curricular film club for BSc Public Health and BSc Health and Wellbeing students to introduce a range of contemporary public health and wellbeing issues in an entertaining way, as an adjunct to traditional teaching and learning. Although a voluntary activity, this club is well attended by students who value the opportunity to explore, in discussion after the film has been shown, themes relevant to public health and wellbeing. Films are usually selected by members of the course team, but suggestions from students are also encouraged.
- The second involves use of an eclectic mix of feature films to bring leadership theory to life as part of the mandatory taught element of two post-experience leadership courses. Students are asked to select a movie from a box of DVDs and watch it as homework in between lectures. However, the real task is to view the film through the lens of a number of different leadership theories and then to discuss the findings in class the following week.

Examples of some of the films used by the authors in their teaching were shown in two short video montages created for the workshop (see Table 1). Both videos have been uploaded to YouTube and can be accessed at the addresses shown below the table.

Table 1

Public Health and Wellbeing Films[1]	Leadership Films[2]
Erin Brockovich (environmental contamination)	Erin Brockovich (situational leadership)
Contagion (epidemiology, communicable disease)	Invictus (leadership vision)
Dreams of a Life (ageing, loneliness, social capital)	Spartacus (followership)
Precious (abuse, social & structural determinants)	Alien (female leadership)
Desert Flower (FGM, emancipation)	Gladiator (leadership traits)
Still Alice (Alzheimer's disease, aging, identity)	Chicken Run (who can be a leader?)

1. https://youtu.be/Qq0nSce_SzI
2. https://youtu.be/eATLUsCGnwQ

During the workshop, participants were encouraged to reflect on their own teaching practice and identify films that might be used to support their own teaching and/or discipline. The authors shared best practice tips for both extra- and intra-curricular activity and introduced a simple framework (repurposed below as a list of questions) to guide the use of film in curriculum design:

a. Why this film? Are other films more appropriate?
b. What is your main objective in using this film?
c. How does the film illustrate course content?
d. What contemporary issue does the film highlight?
e. What abstract ideas or theory will the film illuminate?
f. How will the film be used to foster critical thinking?
g. How does the film encourage empathy or greater sensitivity?
h. In what way(s) will the film stimulate senses or engage emotions?
i. How will you deal with sensitive issues raised by the film?
j. How will you use the film? *E.g.* in full, clips, trailer, on YouTube, pause and discuss?
k. Will the film be incorporated in the curriculum or made extra-curricular?
l. How will the film be advertised? What assumptions will the students make?
m. Have you checked and addressed any copyright issues?
n. Will the film help make learning fun? If so, how?

Plot Summary

Space precludes a detailed examination of each of the films listed above, but let us focus on one to demonstrate its usefulness as a teaching aid and to address questions *a* to *f* above. Erin Brockovich is chosen as it works particularly well across both public health and leadership. The film is based on a true-life event, namely contamination of a water supply and inadvertent poisoning of local residents by a power company that had been dumping toxic, carcinogenic waste illegally. The film addresses how the problem arose and, indirectly, the crucial role of epidemiology in public health. In addition to dealing with matters such as environmental health policy and risks to community health, the film addresses issues of social justice, community action and ethics in public and environmental health. In fact, many of the courses on the BSc Public Health and BSc Health and Wellbeing programmes are represented in this film, making it an ideal, integrative vehicle for teaching and learning.

A similar claim can also be made for leadership teaching. The film raises important issues of unethical leadership and the failure of corporate governance when shareholders' interests take precedence over those of other stakeholders. The film also poses the question: Who can be a leader? Erin Brockovitch is not a leader at the beginning of the film, yet she becomes one. She is not just a lowly legal clerk who assumes the mantle of leadership – she is a *female* legal clerk and the fact she is an unemployed, single mother struggling to support her family challenges the stereotype that only men in positions of power can be leaders. The film can be viewed through the lens of many different theories, for example situational and contingency theories of leadership. The film is also about leadership style and the skills and behaviours required of effective leaders, such as how to influence others, how to deal with conflict, how to build trust and so on. As an adjunct to face-to-face tuition, this

film of two hours eleven minutes, watched by students in their own time, bolsters eight hours of classroom teaching.

Denouement

The process of delivering the workshop and reflection on participants' feedback reinforced the authors' belief that in order to enhance the learning of public health, wellbeing or leadership students, we need to develop in them, as future practitioners, their critical awareness and sensitivities. The goal is to create more thoughtful practitioners who will be able not only to perform more successfully academically, but also to operate across a broad range of contexts and organisational settings. Whether assuming the role of leader or working in the fields of public health and wellbeing, students will find themselves facing, across a variety of disciplines after graduation, complex or even "wicked" challenges (Rittel and Webber, 1973) for which there are no obvious solutions, responses or easy answers. We need practitioners who can see problems from multiple perspectives and distinguish between the particular and the general; we need practitioners who can get under the skin of complex problems and develop their own creative response to them. Both film and the humanities in general can help our students' understanding of and responses to the world around them, fostering greater critical acuity and thereby producing more rounded, holistic practitioners.

Overall, our experience of the workshop, together with the literature that we had reviewed, reaffirmed our conviction that films are an excellent vehicle for illustrating course content, focusing attention on a contemporary issue, stimulating senses, engaging emotion, fostering empathy, making sense of abstract ideas, promoting critical thinking and, above all, making learning fun! Many of us in higher education are already using film, literature and drama in lectures, seminars and extra-curricular activities, and referring students to wider learning opportunities that include cinema, novels, autobiographies and art exhibitions outside formal study. However, we need to continue to find new, imaginative ways to help stimulate and encourage increasingly flexible, ethical, authentic, creative and appropriate learning options for our students.

In conclusion, use of film both as part of and alongside an already busy curriculum brings with it synergy that may be difficult to realise through traditional modes of teaching. More importantly, it is about what works well in learning and teaching and why what we do matters. We argue that use of movies in the classroom has multiple pedagogic benefits and offers students a broader and more multifaceted range of opportunities to enhance their learning and development. We seek to encourage further debate about how we can enrich students' learning, firm in the belief that film can and should be a vital part of the lecturer's toolbox.

Out-take

For those readers who wish to use film as part of their teaching, "the performance of a literary, dramatic or musical work before an audience consisting of teachers and pupils at an educational establishment and other persons directly connected with the activities of the establishment … is not a public performance for the purposes of infringement of copyright" (Copyright, Designs and Patents Act, 1988).

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Panopto: the Potential Benefits for Disabled Students

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This paper sets out to review the recent Panopto (lecture capturing) trial undertaken at University of Greenwich. We discuss the scope and findings of the trial. The universal design for learning (UDL) concept is briefly addressed to demonstrate how universal design can (even though the emphasis is on disabled students[1]) benefit a great many students, thus enabling the university to comply with the Equality Act 2010 aspect of anticipatory measures. In addition to the potential advantages and disadvantages for future disabled students who may not be in receipt of the Disabled Students' Allowances (DSA), we also suggest potential institutional benefits and how different cohorts of non-traditional students may benefit from the technology.

Why Panopto?

Panopto was chosen for the trial following extensive research by teams within Information and Library Services (ILS) and the Educational Development Unit (EDU), taking into account previous knowledge and experience of Echo 360. Hardware-based systems such as Echo 360 were quickly ruled out on the basis of cost and flexibility. Panopto was therefore selected for the following reasons:

- the ability to use the system on personal computers, laptops, Macs, tablets and mobile phones;
- the ability to search videos for key words spoken by the presenter or appearing on PowerPoint slides;
- the ability to integrate with the University's virtual learning environment (VLE);
- the ability to live-stream presentations;
- ease of use;
- it is the most widely adopted lecture-capturing system within UK higher education;
- its compatibility with a number of assistive software technologies.

In addition, the system was developed from a project at Carnegie Mellon University and, at an early stage, Eric Burns, Chief Product Officer, identified its importance for meeting the needs of disabled students: *"One of the original applications of our video platform was to bring Carnegie Mellon University lectures to physically disabled students who couldn't attend class."* (Schaffhause, 2013).

The Trial: Scope and Findings

The group designed the trial to take place in semester one of the 2014/15 academic year. Over forty academics across all faculties initially volunteered to take part in the trial. Those who volunteered to take part but who did not actually participate reported that this was largely because of the limited time available to plan for the inclusion of the system in teaching activities and doubts about the availability of the system in the long term.

[1] 'disabled students' covers physical disabilities, the autistic and dyslexia spectrums, long-term health conditions and mental health difficulties.

Feedback from those who took part in the trial was very positive. First-and final-year student committees in the Department of Computing and Information Systems requested all lectures to be made available via Panopto. The Student Union also used the system and consulted with students; They reported that students would like all of their lectures recorded. However, the legal and policy aspects of the trial were areas identified as requiring further investigation and discussion at a senior level within the University.

Universal Design for Learning: Potential Benefits for Disabled Students

The concept of UDL is not a new one[2] and yet many lecturers and students are unaware of how the seven principles can benefit the majority. Whilst UDL began life as an architectural and design concept, the principles can be applied to technology. This is exemplified in Principle One - Equitable Use: the design is useful for and marketable to people with diverse abilities[3]. As Sheryl Burgstahler from the Wyoming Institute for Disabilities (WIND) states, *"When UDL principles are applied, products and environments meet the needs of potential users with a wide variety of characteristics. Disability is just one of many characteristics that an individual might possess[4]."*

Several authors (Brogan, 2009; Williams & Fardon, 2005) have identified lecture capture as a means of implementing UD principles, the main UD benefit being flexibility of access.

Lecture capturing facilities may be one method by which the University can adhere to the Equality Act 2010 and thus avoid discrimination. The purpose of the duty is to ensure that disabled students can access their education on a par with their peers (Slater *et al*, 2015).

Recorded lectures can provide valuable (and valued) revision materials for students, as well as being particularly useful for students who may find difficulty comprehending a lecture fully at the time of delivery (Karnard 2013 [5]; Owston *et al*, 2011[6]). Some disabled students require notetaking support for their lectures and seminars - for example, deaf and hard-of-hearing students who cannot physically hear the lecture[7] or physically-disabled students who cannot maintain notetaking at a sufficiently fast pace[8] to keep up.

Whilst Panopto is not a universal remedy, there have been suggestions from as far back as 2007 (Hughes and Robinson) that lecture-capturing may reduce the need for notetakers in lectures. A study from Canada confirmed that 81% of students who had identified a need for 'accommodations' (reasonable adjustments in the UK) reported that lecture-capturing was helpful (Vajoczki *et al*, 2010). A number of the disabled students in this study suggested that lecture-capturing might replace their need for notetakers. This is timely, owing to the imminent cuts to DSAs which currently fund the majority of notetakers within UK higher

[2] http://www.ncsu.edu/www/ncsu/design/sod5/cud/about_ud/udprinciplestext.htm

[3] http://www.ncsu.edu/www/ncsu/design/sod5/cud/about_ud/udprinciplestext.htm

[4] http://www.uwyo.edu/wind/_files/docs/resources/ud_review.pdf

[5] http://eprints.lse.ac.uk/50929/1/Karnad_Student_use_recorded_2013_author.pdf

[6] http://www.sciencedirect.com/science/article/pii/S1096751611000418

[7] http://eric.ed.gov/?id=ED437777 Notetaking for Deaf and Hard of Hearing Students 1997

[8] http://cjo.sagepub.com/content/67/3/162.full.pdf+html Accommodation Needs and Student Environment Fit in Upper Secondary Schools for Students with Severe Physical Disabilities 2000

education (Willetts, 2014). The potential benefits for students with a disability and/or specific learning difficulty are numerous and are presented in the table below.

A synopsis of the potential advantages and disadvantages of Panopto for disabled students:

Potential Advantages	Potential Disadvantages
24-hour access	Cognitive overload/saturation
Illness or hospitalisation	Technical failure
Substantial bereavement	May discourage students from attending lectures
Less reliance on in-class support staff	Unhelpful and/or technophobic teaching staff
Fonts, screen colours and audio can be altered	Non-engagement, owing to the technical knowledge and understanding required
Visual instruction for deaf and hard-of-hearing learners	Costly equipment may be required at home
Audio instruction for blind or visually-impaired students	
Enhanced student experience	
Can be used on mobile devices	

However, lecture capture is not a panacea, as accessing lecture content is just one aspect of a university education for a disabled student (Gibson, 2015).

Potential institutional benefits:

- Recruitment – 65+ universities use Panopto in the UK. Prospective students' choice of university may well depend on the availability of lecture-capturing services.
- Retention: flexible approaches to accessing lectures and/or seminars may enable students at risk of leaving their degree early to stay the course. Two disabled students in the Vajoczki *et al* study reported that, owing to deteriorating medical conditions, they would not have completed their degrees without such assistance.
- The cuts in the Disabled Students' Allowances (DSAs) will revoke much of the support which is currently available and lecture capture systems constitute one means by which universities may be able to fill this gap.
- Enables the university to practice reasonable and anticipatory adjustments.
- Lecture capturing may also assist other cohorts of non-traditional (widening participation) students, such as students who have English as an additional language; students who are the first in their family to go to university and may not have had access to the terminology/vocabulary used in higher education; students who are caring for a disabled relative; students with a low socioeconomic status, who may struggle with travel costs to and from the university.

Conclusion

Following the trial, the University has adopted Panopto on an 'opt-in' basis, meaning that, whilst its use is encouraged, it is not compulsory for staff to provide recordings of lectures. The reception by both staff and students of the system continues to be very positive. The

team leading the system's implementation is now focusing on raising academic staff awareness of its availability and potential; there is also particular focus on ensuring that the University's disability team is aware of the system's potential to support students with a wide range of disabilities. The *Accessibility Project will continue to inform disabled students in their outreach work of the benefits of lecture capture to the disabled students they work with.

This review confirms in its exploration of lecture capturing that there are significant immediate and subsequent benefits to students, both disabled and, more widely, non-traditional, as well as to their higher education institutions. At a time when DSA.s are threatened, universities may well find it worthwhile to address such potential disadvantages as are identified here to capitalise upon the undeniable benefits of these systems.

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