

Individualising Media Practice Education Using a Feedback Loop and Instructional Videos Within an eLearning Environment.

Trevor HARRIS
Department of Film and Media,
School of Creative Arts, University of Wales Trinity Saint David
Lampeter, Ceredigion, SA48 7ED, Wales, United Kingdom

ABSTRACT

This paper explores the development and impact of the author's TELE (Technology Enhanced Learning Environment) action research project for individualising media practice education. The latest iteration of different classroom methodologies being employed to develop high-level skills in media production, the author has combined an interactive eLearning approach with instructional videos and, crucially, an individual feedback loop in order to widen access to the curriculum and create a more efficient teaching and learning environment. The focus therefore is on student engagement and organisational efficiencies as a result of the research.

It should be noted that there has been no funding attached to this work, nor are there any institutional imperatives or other stakeholder involvement in this research. This project has been undertaken by the author as an evolutionary development of the various methodologies developed, cognisant of the increased technology literacy of the student cohort. The educational benefit of bringing video instruction into the curriculum as part of the project is examined as a creative pedagogy of direct benefit to students rather than as a subliminal marketing tool that other systems are often used for.

Over 16K words of written data was collected during the project, and this is analysed both quantitatively and qualitatively with reference to the initial objectives of the research

Keywords: action research, feedback, eLearning, instructional video, creative pedagogy, technology enhanced learning, and student-centred teaching and learning

1. INTRODUCTION

Using material gathered from student feedback comments as well as empirical evidence from classroom support teachers and support tutors, the paper explore two aspects of the TELE concept. The primary focus is on the innovative use of feedback to individualise teaching and learning; the second aspect is to reinforce the use of video as an inclusive experience for a wide range of students and assess how it contributed to the individualisation of classroom teaching. Finally, the paper looks at how these innovations might have empowered students to become self-sufficient and reflective learners.

During the course of this research a range of manual and, more recently, digital technologies have been used in an attempt to generate interaction, deeper engagement and feedback from students. This paper concentrates primarily on the latest work using an eLearning system.

It is the use of the Moodle eLearning environment that has enabled the innovative use of an individual and inclusive feedback loop, which has in turn enabled evaluation of the impact of the technology implemented in workshops to be assessed and refined for the cohort of students engaged in the course. Instead of an end of course questionnaire evaluation, which has little if any relevance for students that have completed the course in question, the submission of feedback for every learning opportunity makes the process meaningful and relevant for the student actively participating in that learning. The standard summative questionnaire involves tick boxes and perhaps one sentence of comment, whereas the TELE methodology has elicited up to 1.5K of free text narrative per student, collected over 11 weeks, establishing a student-tutor discussion that can direct that student's learning, whilst the tutor has in depth comments that can be used for evaluating the effectiveness of the teaching and perhaps for wider quality assurance purposes.

2. OBJECTIVES

The research was motivated by a number of factors and objectives set by the author, influenced by and having reflected on the unsatisfactory nature of the standard end of module questionnaire. Without any detailed comments the plethora of tick boxes were of limited or no help in assessing the 'performance' of the teacher, the usefulness of the teaching materials, and the development of the student as a critically reflective learner. How could the gap between the teacher as a lecturer and the class as passive recipients of teaching be bridged? A number of imperatives defined the approach taken.

Firstly, within traditional curriculum design there is acknowledgement of the power of assessment in defining the outcomes of a learning opportunity. This *constructive alignment* [4] is effective as far as it goes. It does not, however, realistically allow full and inclusive assessment of all aspects of a course or module to be assessed, due to the range, number and amount of assessments having to be limited due to obvious logistical considerations. There is no measure or recognition of prior or

experiential learning by the student. How do we know how much our teaching has actively contributed to the learning outcome?

Secondly, how also can we gain an understanding of what the student is seeking to learn from a course. It may simply be “enough to be able to pass” but there may be a less jaundiced view. How can we find out if students have more altruistic motivations?

Finally how can we as teachers engage students in deeper learning, encouraging them in critically reflecting on their learning? Is it possible to give them individual attention, to *individualise* their education.

In order to help inform these imperatives the research initially sought to address the following broad issues

1. How effective was the author as a teacher?
2. How effective were the materials that were being used?
3. How did the students respond and reflect on their learning?

These were tested using a number of interventions.

3. INTERVENTIONS

Intervention 1: Manual use of post-it notes.

The initial method for an intervention used anonymous post-it notes. These were used in order to gain an understanding of a student’s existing knowledge and their expectation of a course. These were colour coded; RED to indicate existing knowledge of, for example, their use of Photoshop for image manipulation; and GREEN for what the student expected to learn from the course. YELLOW was also used at times during the course to get feedback on a process such as handing in work on a disc (at the time a surprisingly fraught issue for first year students in an unfamiliar IT setup) or to ask what the most difficult aspect of a class had been. The post-it notes were handed out in class, filled in at the appropriate time and then collected up in a ballot box as students left the class. The author could then read and reflect on the contents and report back to the class any points of interest or changes made as a result of those comments.

The author found this to be a successful and personally empowering process. It was extremely gratifying to know that the students did not know very much about the subject, were wanting to learn what you are planning to teach them, and that unbeknownst to you, they were not all struggling with difficult concepts.

This manual process was used effectively in gaining insight and feedback from students up until the university made the Moodle VLE available in October 2008. The introduction of this service opened up the possibility of a new digital approach, albeit without the anonymity offered by post-it notes.

Intervention 2: Introduction of the Moodle VLE.

The advent of an eLearning system was immediately recognised as having the potential to be a powerful alternative to post-it notes. The Moodle system offered an enticing range of features

for engaging students in dialogue, such as Blogs, Forums, and Assignments.

The author’s previous experience trialling a course message-board had not been successful, with little or no unprompted input from students. Thus an alternative approach was needed. The author found that Moodle’s online assignment tool had the most potential due to its free-text format option. Therefore, within the course structure in Moodle, each week’s workshop activities were uploaded, followed by a short ‘assignment’ soliciting feedback to the questions shown in figure 1 below.

Please comment briefly on the following:

1. What did you learn from this workshop?
2. What was the trickiest aspect of the workshop?
3. How could the workshop be improved?

Figure 1. Intervention two feedback questions.

This relatively simple and unsophisticated method of gaining feedback was then ‘marked’ by suitable comments from the author; it was not formally included as part of the assessment for the course. It did, however, serve the purpose of prompting the student to reflect on the workshops as a learning experience, establishing whether the materials and arrangements for the workshops were satisfactory, and allowing students to make suggestions for improving a course *whilst it was being taught to them*. There were, however, no significant changes suggested and so consequently none were made as a direct result of this feedback. The workshop feedback questions were presented to the student in Moodle as part of each session’s activities as shown in figures 2 and 3.

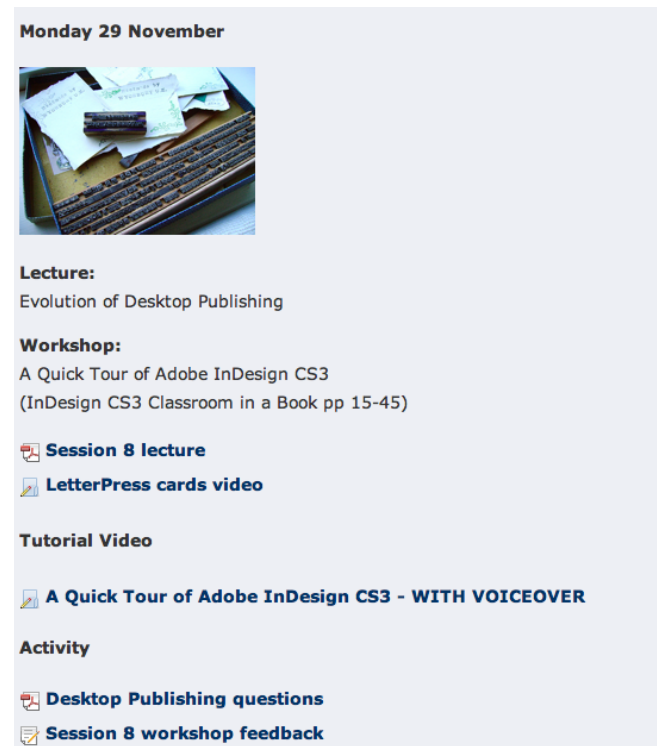


Figure 2. The workshop feedback was presented to the student as an activity tied to each Moodle session.

- Please comment briefly on the following:
1. How useful was this week's lecture?
 2. Did you find the video helpful?
 3. What did you learn from this workshop?
 4. What was the trickiest aspect of the workshop?
 5. How could the workshop be improved?

Figure 3. The workshop feedback questions as presented in a Moodle session.

The author reflected on the first year course in particular and resolved to find a more effective way to empower students and make more efficient use of resources. Having gone digital in terms of the mode of delivering content, the approach to teaching and learning had to be also be moved out of an analogue mode of thinking.

Intervention 3: All digital in 2010-11.

Having successfully introduced the Moodle VLE into teaching and learning in 2008-09 and bedded it down in 2009-10, the author decided to take it a step further in 2010-11. The first year class were chosen to be the test bed for a deeper digital approach, reducing the amount of paper distributed and making greater use of online technologies.

For example, paper copies of workshop notes were to be reduced to one per workshop seat and therefore shared (workshops were repeated four or more times a week), whilst, controversially in the mind of the author, lecture notes and other handouts were to only be available online.

After the first week it was immediately made known that the new cohort of students had different expectations to their predecessors, particularly in terms of the type of materials used in workshops. Communicated using question 3 of the feedback mechanism, 'How could the workshop be improved?', the message communicated was that learning from paper copies was not a suitable method for digital natives weaned on YouTube and online tutorials. The movement of materials onto Moodle had not gone far enough!

The most anguished comment, which was not expressed either in class or in any other environment, was that:

"Some people learn differently, when I was given the book to look through and follow, I wanted to cry. If I was given the option of watching a online tutorial (YouTube), this would be much better".

A second commented:

"I think that if there was a demonstration it would have

helped me learn this a lot faster"

whilst a third observed that:

"I think the workshop could be improved by not only just giving us a handbook to work through but a practical demonstration at the beginning of the session".

Taking these and many other comments into account, the author set about creating weekly videos as support material for the weekly workshops. After implementing the video channel in week four, the feedback was questions were subsequently expanded from three to five as shown in figure 4, adding in an opportunity to comment on the lecture as well as that relating to the additional weekly video material.

Please comment briefly on the following:

1. How useful was this week's lecture?
2. Did you find the video helpful?
3. What did you learn from this workshop?
4. What was the trickiest aspect of the workshop?
5. How could the workshop be improved?

Figure 4. Intervention three with two additional feedback questions.

There was immediate and positive comment from individual students, such as "I was told there was a online tutorial, which helped a lot." Another commented, "It (the workshop) was easily understood thanks to the video", whilst a third remarked on their use of both the printed and video material, "I'm using the video as well as the booklet now, because I find it easier to understand". The empowering aspect of having a video to help reflect on the success of the workshop was another important factor, as noted in this feedback comment,

"The video was useful, and gave a clearer outline of the end result instead of potentially making our way through the workshop, making a big mistake on it and being none the wiser".

The university's Student Support Service also found that the implementation of the video lessons was impacting positively on their students. A deaf student reported that:

"The video is very, very helpful. It has a voice-over, which is not much use for me, but I can use the handbook with it as subtitles. The handbook on its own is very difficult to learn from, it is not clear enough",

whilst the impact on a Dyslexic student was noted:

"Working from the handbook was overwhelming her and sapping her confidence as there were 'too many words and it does it in a complicated way'. With the video she has regained her confidence finding 'learning the software this way is much easier'."

The member of staff concerned also made the following unsolicited remark in an email:

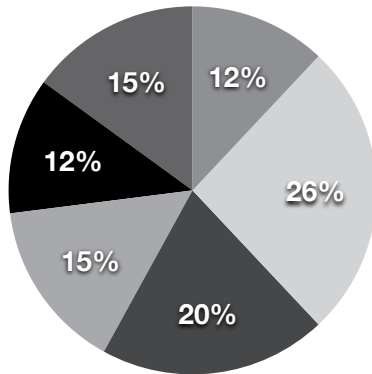
"From the point of view of a support tutor I wish more lecturers would present information in such an inclusive and creative way."

4. DATA ANALYSIS

With the availability of the detailed and extensive comments from the Moodle feedback the original objectives can be revisited and the data analysed using both quantitative and qualitative methods

Quantitative analysis.

We can extract some raw statistics from the feedback data in terms of the amount written by the students, and how many sessions were commented upon, as shown in figure 5.



of students in project = 34

of words in feedback comments:

12% 0 words = 4 students

26% Up to 249 words = 9 students

20% 250 - 499 words = 7 students

15% 500 - 749 words = 5 students

12% 750 - 999 words = 4 students

15% Over 1K words = 5 students

TOTAL number of words = 16,040

TOTAL number of students making comments = 30

TOTAL number of sessions commented on = 204

Figure 5. Moodle feedback data analysis.

This can be compared to the standard end of course questionnaire feedback for the same course, as shown in figure 6 below.

forms distributed = 34

completed forms = 22

TOTAL number of words written = 108

TOTAL number of students making comments = 8

Figure 6. End of course questionnaire feedback data analysis.

From the data analysis shown in figure 5 and figure 6 it is clear that the continuous feedback loop set up in Moodle has very successfully engaged students in written feedback comments, despite that effort not being formally assessed or subject to any formal reward or, conversely, subject to sanction if not completed. To make the point even more starkly, the longest response on the standard end of course questionnaire was 25 words, compared to feedback of 1,564 words submitted by one

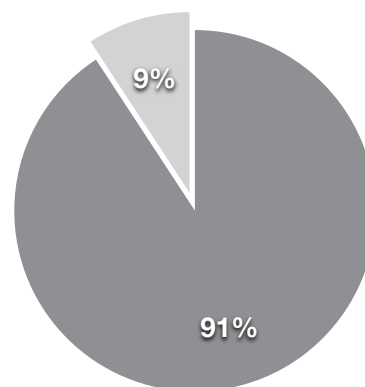
student on the Moodle weekly feedback activities.

It is, however, not all about quantity. Although 30 out of 34 students completed some form of feedback, and nearly half of them wrote at least 500 words, some of the most telling feedback came from those that wrote under 250 words in terms of making a clear point about their needs, whether it be requesting online videos, requesting personal copies of notes, on specifically coloured paper, when and where the video should be shown, or how they used the video.

Qualitative analysis.

In the initial stages of the research the students were asked to reflect on what they had learned during a workshop, conceptualised by the author as a mechanism for immediate recall that would help embed that learning. They were also asked to recall the trickiest part of the workshop, in order to highlight any general problems that the author could respond to, and finally, include any comments or suggestions on how to improve the workshops, using the feedback questions shown in figure 1 above.

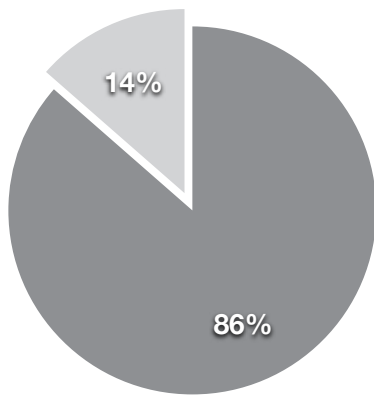
In the extended feedback, shown in figure 4 above, students were also asked to comment on the lecture as well as the introduction of the video exemplar of the workshop on YouTube. It is true to say that both of these additions were approached with some trepidation by the author as they opened up the prospect of unfavourable or personal comments on the 'performative' aspect of lecturing and his performance as a video editor and voice-over artist. It was almost an act of faith that the students would not, however, be unkind in their comments. The submitted comments have been analysed as shown in figures 7-11 below.



177 comments = Instant recall (91%)

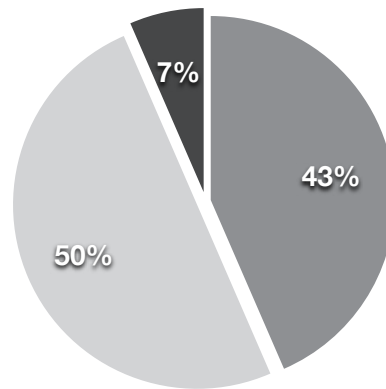
18 comments = Reflective comment (9%)

Figure 7. What did you learn from this workshop?



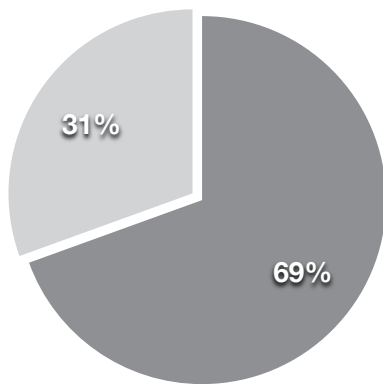
153 comments = Note on aspect of process (86%)
 24 comments = Reflection on process (14%)

Figure 8. What was the trickiest aspect of the workshop?



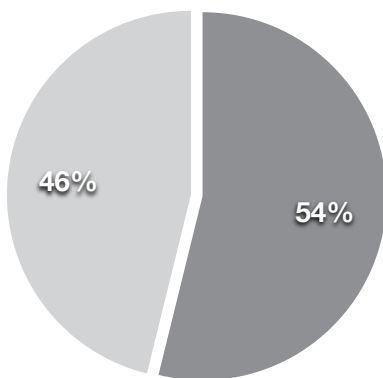
20 comments = Helpful (43%)
 23 comments = Helpful with reflective comment (50%)
 3 comments = Not helpful (7%)

Figure 11. Did you find the video helpful?



132 comments = No improvement (69%)
 58 comments = Suggestions for improvement (31%)

Figure 9. How could the workshop be improved?



21 comments = Useful (54%)
 18 comments = Useful with reflective comment (46%)

Figure 10. How useful was this week's lecture?

Analysis of objectives

In terms of meeting the objectives of the research we can see from the quantitative analysis that the project managed to engage students in meaningful feedback and comment on their learning over a sustained period. This activity delivered far more useful and meaningful data than the end of module questionnaire. We will now discuss the three main objectives using the previous analysis

1. How effective was the author as a teacher?

The author's teaching was favourably reviewed as shown by the 70% that felt that no improvement or changes were needed to the classes. The introduction of the videos was also favourably received with only 7% not finding them helpful, whilst no one commented that the lecture was not useful.

2. How effective were the materials that were used?

The feedback mechanism allowed students to suggest changes to the way materials were being presented, whether it be the arrangements for colour copies of workshop notes, loan copies of notes, the production of videos and so on. The 30% of comments requesting changes or making changes were by and large satisfied by the changes made. Others that related to group activities are more problematic and will require further thought. For example, it is unclear how a group discussion be organised following a workshop when the participants are all completing the task at their own pace and therefore finishing at different times. The logical method would either be a later seminar (but for what purpose?) or an online discussion that may not be effective. These follow on activities, however, may well be effective in a different context to one that is predominantly practise-based.

3. How did students respond and reflect on their learning?

The qualitative analysis shows that when asked to comment on what they had learned that 9% of the students offered a reflective comment that went beyond a simple listing of the content of the class. That figure rose to 14% when they were asked to

comment on what had been the trickiest aspect of the class (aka 'the muddiest point'[4]), rising again to 30% when asked how the workshop could be improved. An additional two questions were added in towards the end of the project and therefore had fewer responses. Nevertheless, when asked about usefulness of the weekly lecture almost half of the students reflected on why the lecture was useful, almost all of these exercising their critical faculties to contextualise the content into the broader course or their own learning objectives. Finally, the videos that had been introduced as part of the action research as a direct result of student demand, not surprisingly elicited the highest percentage of positive reflective comments at 50% of those submitted.

5. CONCLUSIONS

The TELE action research project has proven invaluable for the author in establishing a closer rapport with the student cohort. It has empowered the author in his teaching and confirmed his confidence with the materials being used. It has also empowered the students by introducing them to reflective practice early on in their higher education course. It has kick started the author into producing videos for use in the classroom having been prompted to work through the qualitative issues involved in instructional video production as well as overcoming the reticence of being actively included as part of a video production.

The building of a closer rapport with students has been an observed outcome of online pedagogy in previous research and been shown by O'Donohue (2009) to also generate positive outcomes in terms of student retention [6] whilst the Association for Learning Technology [1] notes that the REAP (Re-engineering Assessment Practices in Higher Education) Project's [7] Psychology Case Study [3] found that rich and regular feedback has a positive effect on attainment. An interesting aspect of the latter is that there was a redistribution of instructor-led activity away from traditional classroom and lecturing activity towards greater student online interaction with course materials. A key aspect of that change is that the time spent by the instructor was not reduced, and that the change in focus led to positive gains both in terms of predominantly strategic institutional priorities (retention) and predominantly instructor priorities (student attainment). This is a key issue for academic managers who may see online pedagogy as a means to reduce staffing and increase efficiencies.

The realignment of activity accords with the approach of Salman Kahn's *The Kahn Academy* which uses instructional video to 'flip' education [5], so that what was formerly classroom activity takes place online and away from the classroom, and what was formerly homework becomes the focus of face to face interaction in the classroom.

In terms of this research it is suggested that there are the following lessons to be learned from the Technology Enhanced Learning Environment used in this research:

1. Feedback should be a continuous process, acting as a

'pedagogic glue' to bind a course together.

2. Formative feedback can enable students to direct their teaching and reflect on their learning.
3. Video is a transformational and inclusive tool in education, freeing the classroom for individualised teaching. Students can use the video to troubleshoot problems for themselves, freeing the teacher to answer deeper questions in one to one encounters. This can also create organisational efficiencies in some areas, as less support time is needed in the classroom to respond to technology related issues.
4. Instead of classroom time being used in a "one size fits all" exposition, the lecture videos can be watched at any time allowing one to one classroom time to be used in a far more effective and efficient way.
5. The focused and appropriate use of technology empowers students by allowing them to experience learning at their own pace and in their own time.

6. FURTHER RESEARCH

The approach used in this research could be taken further to establish whether the methodology used is scalable, taking into account that the time taken to answer individual online feedback comments is not inconsiderable, let alone the time taken in any action response or an initiative undertaken.

A second question is what would be the impact if the student input was being marked and was therefore subjected to assessment criteria and judged against set learning outcomes. Would it still be as wide ranging and extensive or would students naturally confine their comments to those indicated by the published marking guidelines for that assessment?

Thirdly, could there be any scope for online peer group activities using this approach?

Finally, the profiles of the students could be analysed and correlated with the feedback data, as could the attainment of the students, to see if there were any insights to be gained from that analysis.

7. REFERENCES

- [1] Association for Learning Technology, 'Technology in Learning', 2010. Available at <http://repository.alt.ac.uk/839>.
- [2] T. Angelo & K. Cross, **Classroom assessment techniques: A handbook for college teachers**. (2nd Ed.). San Francisco, CA: Jossey-Bass, 1993.
- [3] J. Baxter, A Case Study of Online Collaborative Work in a Large First Year Psychology Class. From the REAP International Online Conference on Assessment Design for Learner Responsibility, 29th-31st May, 2007. Available at <http://www.reap.ac.uk/reap/assessment/pilotsSUPsy.html>.
- [4] J Biggs, **Teaching for Quality Learning at University**,

Buckingham: Open University Press, 1999.

- [5] S. Khan, 'Let's use video to reinvent education'. Available at http://www.ted.com/talks/salman_khan_let_s_use_video_to_reinvent_education.html.
- [6] J. O'Donohue & L. Warman, **Can social networking support student retention?** In G. Siemens & C. Fulford (Eds), Proceedings of World Conference on Educational Multimedia, Hypermedia and telecommunications, Chesapeake, VA: AACE, 2009, pp. 3011-3015.
- [7] Re-engineering Assessment Practices in Higher Education (REAP). Available at <http://www.reap.ac.uk/reap/assessment/pilotsSUPsy.html>.