

Student performance and the Electronic Portfolio in WEBLEARN: an analysis of students use of online reflective diaries

Tom Lunt
London Metropolitan Business School
London Metropolitan University

Keywords: *reflective learning, blogs, virtual teaching*

Summary

Online diaries or blogs have been defined by Weil (2006) as “a frequent, chronological publication of personal thoughts and web links” and there is a growing body of academic research around their use in teaching and learning - see for example, Cobanoglu (2006) and Williams & Jacobs (2004).

A pilot scheme to introduce the use of the electronic portfolio to students was conducted during the Autumn semester 2007 at London Metropolitan University are covered elsewhere in this volume by Chalk and this paper deals with the online diary (blog) function available in that electronic portfolio. In particular, it aims to analyse the quality of student reflective entries in those online diaries when compared with the quality of reflective entries made by students using other ('offline') diary forms. Recommendations are also offered on how projects that aim to test student responses to new teaching methods might be introduced in future.

The main question addressed by the paper is, 'Is the quality of student reflection improved by using online diaries compared the use of offline methods?' and its main objectives are:-

- To consider the quality of student reflection in entries to online and off line diaries.
- To compare the academic performance of groups of students using online and offline diaries for reflective work
- To evaluate the efficacy of the pilot study conducted by London Metropolitan University particularly in relation to measuring student responses.

Introduction

The module 'Studying Service Sector Management' is a Higher Education Orientation module and a compulsory core module for Level One students taking Leisure and Tourism related courses within the LondonMet Business School. The module handbook states one of its aims is to:-

'Provide a specific, subject focussed introduction to the learning strategies students will need ...through the development of a professional and personal reflective portfolio, customised to the individual. (A1)'

To further that aim, an online, digital portfolio ('e-portfolio') was provided for and introduced to a seminar group of 23 students, the majority of whom (approximately 80%) were from overseas in week 1 of the module concerned. The 'take-up' of the reflective diary within the portfolio tool was reasonably high, considering it was not a compulsory element, with eleven students using it - 'take-up' being measured by the number of students who added the author as a 'guest' viewer of their reflective diary. This 'guest' function, discussed later in the paper, enables a tutor to view a student's diary online and the tutor can, depending on a student's stated preference, post messages to the student and vice versa. In his capacity as tutor the author made at least one online comment on each of the student's online diaries during the course of the research. It should also be noted that of the eleven students who used the online diary three stopped using it within the first month and one wrote the majority of entries only at the end of the semester.

Methodology

The research design for this paper uses a content analysis of the students' online diaries to analyse the quality of the student reflective diaries following Krippendorff's (1980:21) definition, "content analysis is a research technique for making replicable and valid inferences from data to their context." The reason for using content analysis is that the method is considered to be particularly appropriate for a study of chronological documents such as diaries – see, for example, Robson (2002). The students' grades were examined using descriptive statistics and the qualitative data were examined in conjunction with the tutor's online comments.

The sampling strategy was to take the student's reflective diaries and focus on one key moment, week 6, the point at which students were asked to reflect on presentations given by their group. This sampling strategy was used both to reduce the amount of data for analysis and to use for analysis, the focus of a single activity during the module which was the subject of comment by all students. The original intention was to scan all entries for specific (key) words, however, given the number of errors and inconsistencies in spelling observed in the diaries, the author decided to use whole sentences as the recording unit - despite the known weaknesses inherent in that particular method.

It is not the author's intention to explore in depth the theories of reflective learning which have been dealt with in earlier editions of this journal – for example, Salmon (2006) and in constructing categories for analysis of the recording units the author looks to Dewey's approach to reflection as (1933, cited in Moon:2006:12), "Active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and further conclusions to which it leads..."

The module handbook supplied to students echoes Dewey's (1933) formulation giving the following guidance for reflective writing based on Pedler et al's (2001) expression of Kolb and Fry's (1985) 'experiential learning cycle':-

- **What?** - what did you do? - what reading, listening, discussing, presenting, writing, thinking?
- **So What?** - what do you think of what you did? –
- **Now What?** - what will you do about it? ...

An analysis of the frequencies of three sentence types, derived from the above sequence, were made using the following categories:-

1. Description of events that occurred relating to the presentation
2. Self analysis of performance and analysis of the group performance
3. Considerations of future actions e.g. changes made on the basis of point 2 (above) - designed to improve future performance.

The author applied the content analysis to the students' online reflective diaries and, for comparison, to a similarly-sized random sample of diaries written in offline formats. Similarly, module marks of students in the group who used the online diary were compared with the module marks of students in the group who did not.

Research findings and discussion

The content analysis revealed the following sentence counts,

	Description	Self Review	Future
Online diary	31 (48%)	27.5 (44%)	5 (8%)
Hard copy	47 (45%)	47 (45%)	11 (10%)

So students using the online diary wrote 31 descriptive sentences – 48% of the total analysed, while those who did not, wrote 47 or 45% of the total analysed.

While the results generated did not show a significant difference in the quality of the students reflection, looking at the students **marks**, the following may be observed,

Students using online diary	Students not using online diary	
56	42	
55	46	
50	48	
60	45	
58	48	
58	46	
45	70	
48	60	
45	40	
53	49	Mean
58	46	Mode
55	46	Median
5.8	9.5	Standard Deviation

A comparison of the two sets of average (mean) marks shows a marginally higher mark for the group using the online diary - 53%, compared with 49% for the group who did not use it. However, when the other measures of central tendency (mode and median) are compared there is a clear suggestion that student performance is superior in the group using the online diary. Again, comparing the standard deviations for the two groups, the variance is higher within the group who did not use the online diary. This indicates not only that performance is more variable for those who did not use the online diary but also that their work is of a poorer standard.

The author acknowledges that this piece of research is limited by the size of the sample, and that the results should not be taken as conclusive but rather as suggestive of, and as a prelude to, a more comprehensive piece of research. Therefore, superior performance cannot be attributed, with confidence, solely to student's use of the online diary. Furthermore, the content analysis showed no significant difference in the **quality** of the student's reflective entries and the results may simply indicate that enthusiastic and committed students adopted the online diary while less motivated students did not.

However, the author would also draw attention to the 'guest' function, mentioned previously, which is a feature of the application. Through this function tutors are able to comment directly on students' online diary entries and giving clear diagnostic advice and feedback. An example of this is shown below:-

Hi Sara

Good to see you're blogging. Your entries so far are good, try to think about how your experiences so far will affect how you will work in the future. As I said yesterday try to focus on the tasks that we are doing on this module and the group work. Be specific, e.g. did you find the time management exercise useful? If yes why? If not why? How will you use this learning in the future?

Do be careful with your grammar and spelling, try to spell check your work.

This interactive function was not without its faults, the main problem being that WEBLEARN did not automatically inform the student or the tutor that they had received a comment in the way that, for example, Facebook emails users when they receive a message. However this function is currently being upgraded to the advantage of the student for the delivery of bespoke formative feedback to students on their work via the 'guest' function does seem to have developmental potential. And while the author was also able to give general, formative, feedback to students on their online diaries during the seminar this was limited by both time and student attendance.

Yet, some caution needs to be exercised in the delivery of bespoke advice for, as Lance (2006:89) observes, "The continuing involvement of academics in managing the blog activity, and interacting with the students raised the need for significant resources." However, since the content analysis showed that the majority of students were, whether reflecting online or offline, *describing* their experiences rather than *reflecting on* performance or considerations of the future, and given that particular observation, it may be possible to develop generic diagnostic responses that would not require any increase to resources. Further, if clear parameters are set for online interaction at the beginning of the module e.g. "tutors will post a single message that makes general comments on students work in a specific week, rather than individually", it should be possible to limit the demand on tutors' time.

The delivery of the Pilot

Overall it is the author's impression that the pilot itself could have been delivered more effectively and resourced more generously. In particular a whole-module approach with all students being encouraged to use the online diary would help with student take up. Tutors could have received more training on WEBLEARN portfolio function and students, having received an initial training session, would have benefited from a second, 'refresher', session two weeks into the module.

The pilot would also have benefited from a more focussed approach to surveying students views on the use of the e-portfolio. Students were surveyed by email questionnaires in November 2007 and January 2008 and it is the author's opinion that the timing, in particular that of the second questionnaire was unhelpful coming either at the end, or after the end, of the modules concerned, a time when students

were likely to have psychologically disengaged from them. The use of an online survey tool such as Survey Monkey could have helped improve the response rate. As Chalk (2008:?) acknowledges,

“In general students were very positive, but this could be put down to the ‘halo effect’ or to disinterested students not responding. A sample of 32 self-reporting respondents out of the 200 or so actively engaged in ePortfolio pilot module tutorial groups may not be considered statistically significant.”

There again, while the significance of the survey’s findings may be based on a small sample they are nevertheless in keeping with Lance’s (2006:89) observation that, ‘...students are prepared to interact with weblog technology, and it is perceived by students that this interaction enhances their level of learning’. In future, then, the use of in-class focus groups and surveys both in-class and online, may produce a clearer picture of how the online diary is perceived by students.

Conclusions

The results do not offer conclusive evidence that online diaries enhance the quality of student reflection in the context presented. However, given the evidence relating to student grades, it is plausible to suggest that performance is improved by their use and that this is an outcome that may, in turn, be related to the opportunities such diaries provide for formative feedback. The author recommends that the analysis techniques described above be conducted using larger numbers of participants.

Overall the electronic portfolio pilot produced useful insights into WEBLEARN’s ‘usability’, however, student orientation to the new technology could be improved as could the measurement of student responses to it. Finally, a more focussed approach to the use of e-portfolios that includes both students and tutors and encourages greater participation in them by both, will help to develop a clearer picture of student responses to, and the benefits of, the electronic portfolio tool.

Acknowledgements

The author would like to thank Dr I-Ling Kuo for her help and advice regarding the statistical analysis used in this paper.

References

Chalk P. (2008) ‘Introducing an electronic portfolio: the results of a one semester pilot’ Investigations in university teaching and learning; vol ? ed ? pp?

- Cobanoglu, C. (2006) 'An analysis of Blogs as teaching tools as perceived by Hospitality Management students.' *Journal of Hospitality, Leisure, Sport and Tourism Education* Vol. 5, No. 2. pp83-88
- Kolb, D. A. and Fry, R. (1975) 'Toward an applied theory of experiential learning;', in C. Cooper (ed.) *Theories of Group Process*, London: John Wiley
- Krippendorff K. (1980) *Content Analysis: An introduction to its methodology*, Newbury Park, Calif. Sage.
- Lance J. (2006) 'Contributing to the E-Community: an evaluation of the role and level of usage of weblogs to support teaching and learning in higher education' *Investigations in university teaching and learning*; vol.3 (2) pp85-91.
- Moon J. (2006) *Reflection in Learning and Professional Development: Theory & Practice*. Oxon, Routledge Falmer
- Pedler, M., Burgoyne, J. And Boydell, T. (2001), *A Manager's Guide To Self-Development* (4th Edition), McGraw-Hill
- Robson C. (1994) *Experiment, Design and Statistics in Psychology* (3rd Edition) London Penguin
- Robson C. (2002) *Real World Research* (2nd Edition) Oxford, Blackwell.
- Salmon R. (2006) 'Assessing Reflective Learning: precepts, percepts and practices' *Investigations in university teaching and Learning*; vol 4 (1) pp97-103
- Weil, B. (2006) *Top 20 Definitions of Blogging*. Retrieved 31 January, 2007, from Marketing Terms website: <http://www.marketingterms.com/dictionary/blog/>
- Williams J. & Jacobs J. (2004) Exploring the use of blogs as learning spaces in the higher education sector, *Australasian Journal of Educational Technology* vol 20 (2) pp232-247

Biographical Note

Tom Lunt is a senior lecturer in the area of Tourism, Sport and Creative Industries