STRUCTURED DIALOGUE DESIGN IN LAMS THROUGH INTERACTIVE LECTURE PODCASTING

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Abstract

This paper explores the utility of interactive lecture podcasting in LAMS and the impact of structured dialogue design. It reports how curriculum renewal and innovation were greeted with scepticism by teacher education students enrolled in a compulsory curriculum unit at an Australian university. An analytic induction methodology in conjunction with educational data mining techniques was used to analyse the data. The purpose of the study was to understand one aspect of students' active participatory learning behaviour deemed vital for their success in higher education (HE): willingness to engage in online peer-to-peer dialogue. The paper closes with a recommendation for more systematic monitoring of HE students' online learning behaviour.

1. Introduction

The podcasting of lectures has promised to provide flexible and personalised learning support in higher education institutions in Australia and elsewhere (Dobozy, 2007; Larkin, 2010; Lonn & Teasley, 2009; Shantikumar, 2009). Podcasting is the term used to describe the provision of audio and/or video files for downloading through the internet. Podcasting allows face-to-face lectures to be recorded and made available in addition to live delivery; there is a general trend towards increased online delivery of podcasts in higher education (HE), workplaces and government departments (Kim, Bonk & Teng, 2009). Additionally, digital pedagogies have the potential to enable students to embrace 'active learning methods' (Dobozy, 2007; Kirkwood, 2008; Martyn, 2007), such as to share and compare knowledge and personal opinions, and contest ideas in a flexible, personalised learning environment. However, as a number of researchers have pointed out, the transition from traditional to multimedia-enhanced learning and teaching needs to be carefully planned and to be rigorously evaluated (Dixon, Dixon & Axmann, 2008). Interestingly, Helen Larkin (2010) notes that:

> Student attendance is not a learning outcome. Therefore, in one sense, it doesn't matter whether students attend lectures. What is important is whether learning is transformative and they achieve the intended learning outcomes determined for that unit of study. (p. 236)

This paper focuses on monitoring and evaluating students' willingness to (a) 'come to the party' (attend), and (b) be an active participant by engaging in conversations with peers, using the online space provided, as outlined below, for structured dialogue. The aim of providing additional virtual learning spaces to these first-year students was to assist them to prepare for their end-of-semester examination and induct them into a learning environment that demands greater ownership of learning and self-management skills that many school leavers may not have experienced previously.

The structure of this paper is as follows: first, the concept of interactive podcasting is outlined; second, there is an exploration of the design of 'theme-based asynchronous learning dialogues'; third, the study is introduced, the hypotheses outlined and the data are interrogated against the hypotheses; finally, the discussion and conclusion focus on the potential utility of interactive podcasting and its somewhat problematic relationship with student learning motivation.

2. Interactive podcasting

The conventional lecture podcast is a simple 'one-way delivery system', without the opportunity for learner response or interaction. However, as Gattis (2009) points out, its advantage over traditional teaching methods, such as face-to-face lectures or book learning, is that "students can time-shift the delivery" (p. 3), allowing for the rewinding or fast-forwarding of the content. Moreover, the possibility of permanently saving the digital media to be used at a later stage makes this form of lecture delivery attractive for students.

In seeking 'transformative change' (Hannon, 2009) in my students, I made a shift in the emphasis from information delivery to active dialogue, therewith enhancing the learning experience and helping students to prepare for the final examination. When students actively think about and discuss the information presented through various media (live lectures, podcasts and texts), they become active participants in the dialogue and producers of content and knowledge (Downes, 2008).

Social constructivist learning theories emphasise interaction to aid learners' knowledge production. This occurs through the testing of one's hypothesis or assumptions, inviting others to scrutinise one's ideas, and arriving at a joint understanding of similar or divergent positions through intellectual exchange. Recently coined terms to depict this intellectual pursuit and personal knowledge expansion are: 'the crossing of conceptual thresholds' (Wisker & Robinson, 2009, p. 317), 'ubiquitous knowledge construction' (Peng, Su, Chou & Tsai, 2009, p. 171), 'from knowledge production to knowledge configuration'

(Brown, 2006, p. 111), and 'knowledge transfer' (Nokes, 2009, p. 1). In essence, these trendy terms express a belief in the value of digital social presence and communication in promoting higher-order thinking through active participation and minimising teacher directedness and input. The key is for students to 'buy into' the educational experience, share personal ideas and opinions with others, and display active learning behaviours (Kelly, 2009).

Interactive lecture podcasting is arguably more than a 'natural' extension of the one-way-delivery of lecture content. It is a fundamental shift from traditional 'input education' to designing learning spaces for student production and output. Thus, interactive podcasting marks a paradigmatic shift in educational practice, underpinned by a belief in the idea of self-organising communities of learners as an application of social constructivist and connectivist learning principles. George Siemens (2006) coined the term connectivism as: "driven by the understanding that decisions are based on rapidly altering foundations [and] the ability to recognize when new knowledge alters the landscape". Connectivism entails the sharing of personal knowledge in a multi-faceted exchange of ideas, which are distributed through knowledge 'nodes'. This sharing enables the construction of what Stephen Downes (2008) calls 'distributed knowledge', which is only possible through deep engagement with each other's ideas and arguments, posing challenging questions and providing specific explanations rather than unquestioned agreement.

The interactive podcasting design represents a key difference between school-based, traditional teaching and learning and contemporary HE learning. The former provides a concrete invitation for students to take ownership of their learning. Constructivist learning allows students to actively grapple with, and begin to understand the goal of education: the production of knowledgeable and critical thinkers and lifelong learners. This idea was explored in various lectures and the relationship between independent learning, active participation and 'soft skills development' was explained in an early face-to-face lecture using the interactive podcasting design as a concrete example of the meaning of active knowledge production through collaboration and knowledge exchange.

3. Designing 'theme-based asynchronous learning dialogues'

Learning and teaching in HE is in the process of reconceptualisation to provide a "supportive and cutting edge environment" (Maddux, 2009, iii). As a coordinator of a first year teacher education unit, my aim was to 'design curriculum dialogue' among students, based on my understanding of the educational value of student-to-student communication, discussion and debate. The technology-enhanced learning feature was built on the premise that purposeful

dialogue is meaning-making through open-ended, asynchronous multi-faceted conversations. A dialogue can move through the stages of information exchange to debate, where contrasting ideas are presented, analysed, and evaluated, or it can remain a discussion, where gentle probing and exchange of ideas are foregrounded, without the need for judgement or clarification of respective positions (Nagda & Gurin, 2007).

The invitation to the 'dialogue' was presented as an audio version of the weekly face-to-face lecture, in conjunction with weekly readings that were broken up into 'bite-size bits' and topics (see below) via the learning activity management system (LAMS), designed by Macquarie University. The lecture podcasts were made available shortly after the live lecture and were uploaded in Blackboard (BB), the university's learning management system. However, instead of simply placing the lecture podcasts on BB (adhering to a simple one-way delivery system), they were integrated into a LAMS sequence, (shifting focus from information consumption to knowledge production) through a plug-in (see Figure 1).

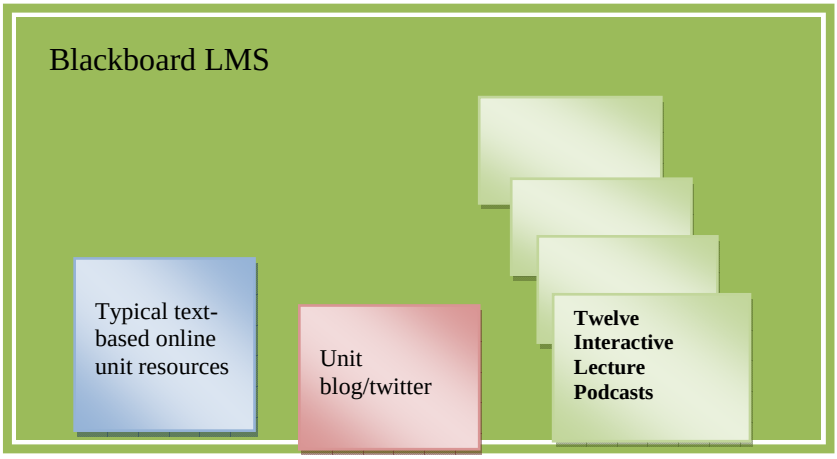

Figure 1. Embedded media in LAMS within a Blackboard unit.

4. Research design

As stated above, the overall purpose of the case study was to investigate whether and how students engaged with the interactive lecture podcasts. Each of the LAMS sequences, integrated into BB, consisted of four elements:

(a) lecture podcast (audio or video file),

(b) voting activity (usefulness of information and personal interest),

(c) forum activity (theme-based asynchronous dialogue), and

(d) survey (time spent and personal value of interactive podcasting activity).

At the weekly lectures, the importance of the structured *forum activity* (see Figure 2 below) for their personalised deep learning and exam preparation was emphasised. Moreover, the relationships, throughout the duration of the unit, between the *forum activities*, lecture topic, readings and exam questions in the end-of-semester exam were made explicit. In other words, the *forum activity* was the centrepiece of the interactive lecture podcasting sessions. LAMS was perceived as the preferred online learning medium because it was found to be user-friendly with its 'swim-lane approach' (see Weller & Conole, 2007) and its well-developed monitoring system (see Dobozy & Pospisil, 2009).

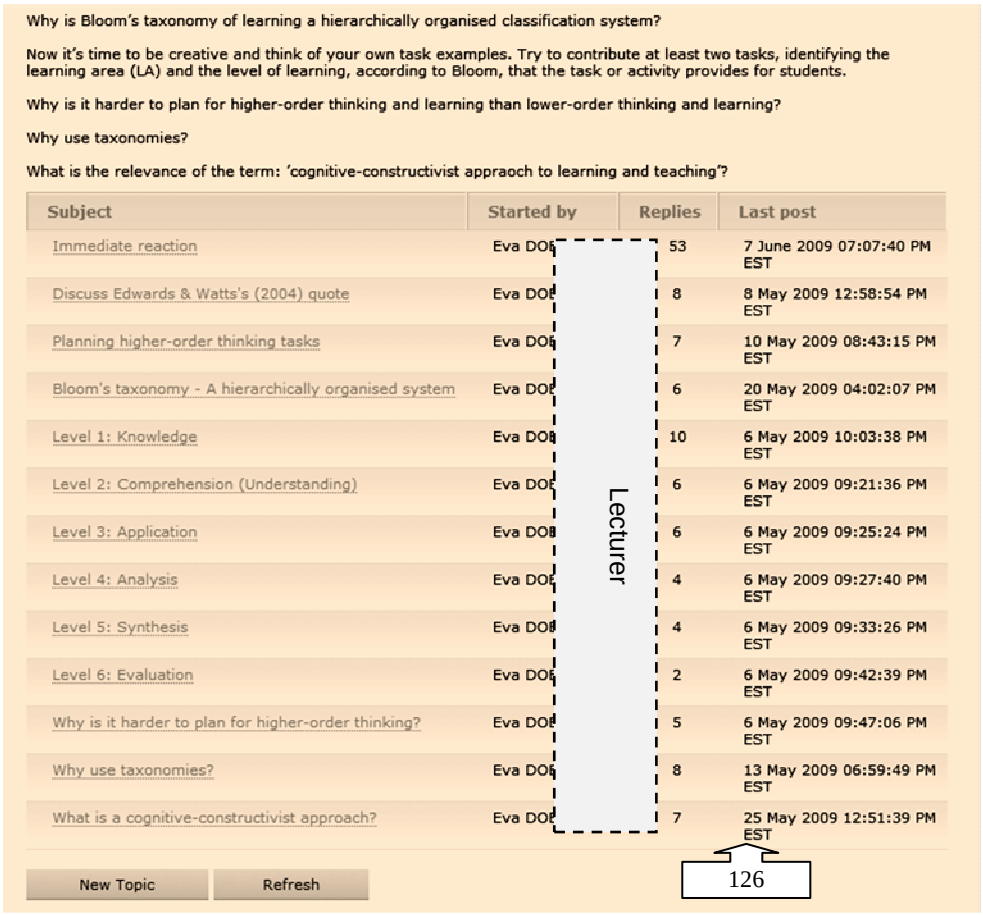

Figure 2. Structured Forum Activity - Lecture 9.

The structuring of student online interaction is an important aspect of the design. The ways in which the forum activities were organised to engage students in higher-order thinking and knowledge expansion is shown in Figure 2 (above) and Figure 3 (below).

4.1. Analytic induction methodology

The case study reported here was conducted within an analytic induction framework. The term 'case study' is used in a variety of ways and underpinned by a number of different epistemological positions, which makes it necessary to specify the particular meaning attributed here. Clyde Mitchell notes: "in its most basic form, a case study may refer to the basic descriptive material an observer has assembled, by whatever means available, about some particular phenomenon or set of events" (2006, p. 26). Case study research is defined here as the study of a single case in a naturalistic setting.

In examining a case of students' willingness to engage in online peer-to-peer dialogue, it was my intention to contribute to theoretical thinking and data-driven decision-making about online discussion forums as a pedagogical tool. The discussion of the results will draw on the literature outlined in the introduction, to emphasise the increasingly prominent role of Web 2.0 technologies in HE and the need to better understand their utility and impact on student learning.

Thus, the construction of hypotheses or propositions relating to the pedagogical value of new learning designs, such as the incorporation of additional interactive podcasting provisions, becomes a logical step in the evaluation of the potential impact of these new technologies. An analytic induction methodology was used to test theoretical formulations and interpretative arguments outlined above. The cyclic focus of this methodology is explained by Katz (2001) as follows:

> There is no methodological value in piling up confirming cases; the strategy is exclusively qualitative, seeking encounters with new variables of data in order to force revisions that will make the analysis valid when applied to an increasingly diverse range of cases. The investigation continues until the researcher can no longer practically pursue negative cases. (p. 84)

The use of analytic induction was favoured over grounded theorising (see Jones, 2004 for a distinction between the two methodologies), because it provides a political standpoint, making overt the personal values held by the researcher. As Katz (2003) so aptly notes, "in the conduct of fieldwork, methods and theory interests are so closely mixed with each other and with historically and socially contextualized relevancies that neutrality is relatively hard to come by" (p. 282). Analytic induction as a case study methodology has its roots in the writing of Florian Znaniecki (Ratcliff, 2006). A variation of the situated data analysis follows

the six-step model of analytic induction resulting from Goetz and LeCompte's (1981, cited in Ratcliff, 2006) adaption of Znaniecki's original theory is outlined below:

Table 1. Analytic induction steps used in the study.

Steps	**Description of step**	**Description of step in current study**
Step 1	Identification of phenomenon	What is the utility of interactive podcasting for deep engagement and exam preparation?
Step 2	Development of hypothesis	Students will engage in dialogue to similar degrees and it is not expected that there will be a significant difference in the utility of interactive podcasts in Weeks 8 & 9 compared with other interactive podcasts.
Step 3	Development of a single case to study	323 students enrolled in one first-year unit and agreed to have their online work monitored for study purposes are the research participants.
Step 4	Confirming or disconfirming hypothesis	In the event of disconfirming results, the phenomenon or the hypothesis needs to be revised and the process will begin by Step 1.
Step 5	Finding of new cases to test the validity of the hypothesis that can lead to prediction of behaviour (affirmation of hypothesis)	Follow-up study to be developed later to affirm or reject refined hypothesis based on the findings of the present investigation.
Step 6	Negative results require a reformulation of the hypothesis (rejection and reformulation of hypothesis)	

A technique known as educational data mining (EDM) was used in this pilot study to gather relevant information on students' willingness to participate in online dialogue (forum activity) from a small data set. It has been noted that EDM lends itself better to small data samples than DM in general (Heiner, Heffernan & Barnes, 2007) because there is no need for large sets of data to test the accuracy of predictions made. Data mining, also referred to as 'knowledge discovery in databases' (KDD), is a research method that facilitates the extraction

of meaningful information from unstructured data sets, such as access logs (Zhao & Luan, 2006). My decision to adopt EDM is based on the following reasons:

- First, there is growing evidence that survey response rates, which traditionally have been less-than-ideal, are falling (Porter & Umbach, 2006). This phenomenon is commonly referred to as 'survey fatigue syndrome' (Clarkberg, Robertson, and Einarson, 2008).
- Second, since participation in this research project is optional for students, it seemed likely that the survey sample would be skewed towards the more engaged students.
- Third, students' willingness to spend time and energy to engage with survey questionaires (for no apparent personal benefit or incentive) may be an even greater indicator of intrinsic involvement with education than the participation in the forum activity.

I saw a need to use a research technique that provided ease-of-access and reliable data that would lend itself to the replicaton of the study, if needed, and the refinement of the assumptions that guided the learning design evaluated here.

4.2. The research questions *(Step 1 of Analytic Induction)*

What is the potential utility of interactive lecture podcasting in LAMS?

Sub-question:

> How willing are students to engage in theme-based, online peer-to-peer dialogue as a form of exam preparation when (a) ***no*** assessment points are provided; and (b) when a negligible amount of assessment points are provided as an added incentive?

4.3. Assumptions *(Step 2 of Analytic Induction)*

Three interconnected expectations that underpinned the learning design:

> A1: *Willingness to access interactive lecture podcasts*: I expected that students would generally be motivated to access the theme-based dialogue starters in the *forum activity* because of their strong relationship to the exam questions and flexible, interactive learning design.
>
> A2: *Social presence will lead to communication and active participation:* I expected that students would, once they were 'present' (listening to the podcast), engage in some form of dialogue with their peers.

A3: M*inimal difference between participation in or engagement with assessed and non-assessed interactive podcast*: I expected that making the strong relationship between the 'forum activity/dialogue tasks' and the 'exam preparation' explicit would lead to minor difference in participation between interactive podcasting lecture/workshop that attracted a minimum amount of assessment points (2% in total) and interactive podcasting lectures that attracted no reward for engagement.

4.4. The study context *(Step 3 of Analytic Induction)*

The first year education studies unit, from which this example is drawn, was designed to assist TE students to form their beginning understandings about teacher skills and teacher roles. Thus, the learning objective of the unit was for students to begin to establish a teacher identity through their exposure to key themes and various theoretical perspectives, in conjunction with first-hand professional experiences at university and in schools.

The learning design provided (invitation to the 'dialogue' through the provision of the interactive podcasting facility in LAMS) was explained to students as an effective exam preparation, with the potential for personalised deep engagement with the learning content on a 'just-in-time', flexible learning basis. It was also emphasised that this activity would enable students to get inducted into HE learning culture, which emphasises ownership of learning and self-regulation (Schunk & Zimmerman, 2007), the benefits of this additional medium was emphasised to students. However, no compulsion or restriction was placed on students' participation (access of the information presented in LAMS). Students were free to move in and out of tasks and lecture podcasts as they wished, up until the exam date. To ensure students were familiar with the technology and the underlying philosophy of flexible collaborative learning design, the nature and purpose of the interactive podcasting provision were explained and there was a demonstration of the media.

Figure 3 below illustrates the interrelationship between a week's lecture topic (topic lecture 4: The learning environment and example: Anna's story), tutorial tasks (intrinsic and extrinsic motivation exercises), weekly reading (two chapters in unit text: Motivation and Behaviour Management), and the forum activity.

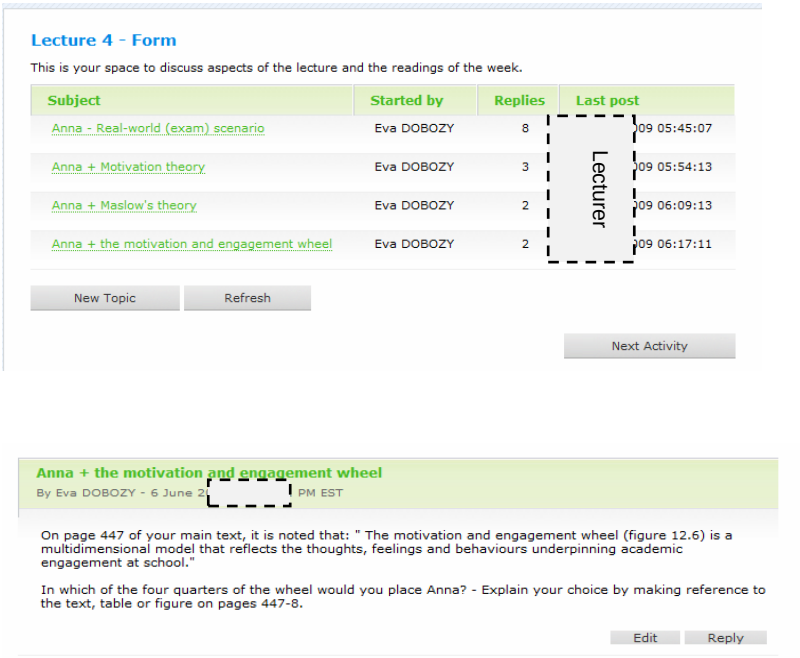

Figure 3. Lecture 4 – Forum activity.

Lectures 8 and 9 were available only through online mode to assist students with greater flexibility and study time during the weeks of their major assignment. In the past, students had complained about the increase in stress caused by assignment work and lecture/tutorial participation during the latter part of their semester. Being able to self-manage their unit work through the implementation of a blended learning mode, it was anticipated that students would readily engage with the online learning material. To ascertain the level of online engagement, all of the TE students were asked to give permission to have their online unit work monitored. All students who consented and completed all assignment points became research participants, which constituted a participation rate of 93%. A total of 323 students' online access was monitored.

5. Results

The research was designed to investigate students' willingness 'to come to the party' (social presence) and become an active participant and contributor to the discussions, making the lecture review truly interactive (cognitive presence). Figure 4 below shows the relative uptake of the learning media on a weekly basis. The x-axis denotes the lecture number and the y-axis denotes the number of students enrolled in the unit (n=323). The size of the bubbles represents the relative number of students accessing interactive lecture podcasts in LAMS.

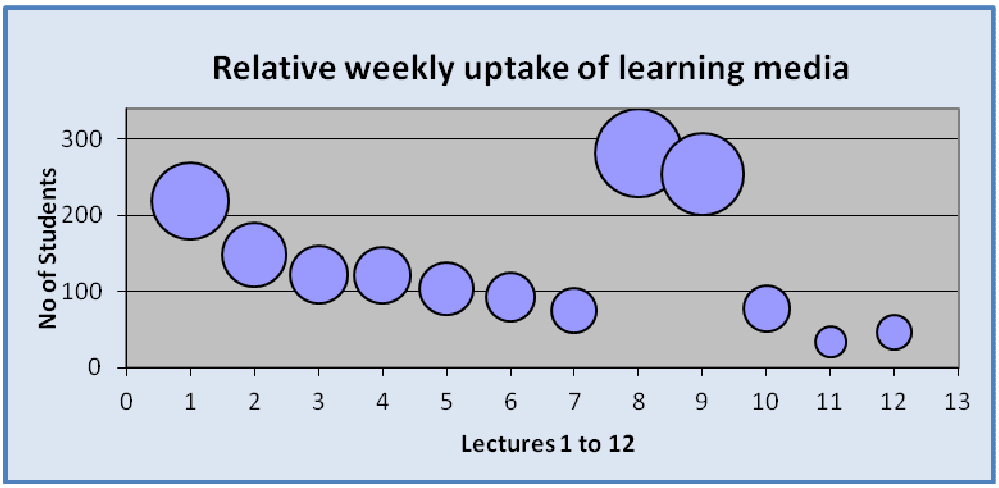

Figure 4. Student access of interactive podcasts in LAMS.

The data on student access was gathered to test the first expectation (A1): *Willingness to access interactive lecture podcasts* and the third assumption (A3): *Minimal difference between access data for assessed and non-assessed interactive podcast.* The results presented here do not support either of these assumptions. As shown in Figure 4, there was considerable participation in the first interactive lecture podcast, but it gradually diminished, with lectures 11 and 12 registering only 34 and 46 participants respectively. Lectures 8 and 9 attracted the most participants (282 and 254), because they attracted 1% of the total assignment mark.

I expected that students would be motivated to engage in the *forum activity*, because of its strong relationship to the exam questions and the convenient way they could be accessed. However, the data clearly shows that students were primarily motivated by assessment points (extrinsic rewards), specifically because the most accessed interactive podcasts were Lectures 8 and 9, which attracted 1% of the total assessment mark each. The assignment mark attached to online learning participation was deliberately kept to an extremely miniscule amount. It is nevertheless illustrative of a general trend in the interactive podcast access of the majority of students, which can be seen as a very pragmatic stance to learning engagement. Lectures 3 to 7, and lecture 10 show gradually declining access rates of access with between 37% for Lecture 3 (122 students) and 23% for Lecture 10 (75 students).

The first interactive podcast (Lecture 1) was accessed by 219 students (68%), and the most accessed podcasts were lectures 8 and 9, attracting 282 (87%) and 254 (79%) students respectively. This result suggests that a great majority of students were able to access the interactive podcasts, but not particularly willing to do so on a regular basis. Hence, the

empirical data contradicts the third expectation (A3: *Minimal difference between access data for assessed and non-assessed interactive podcast*.)

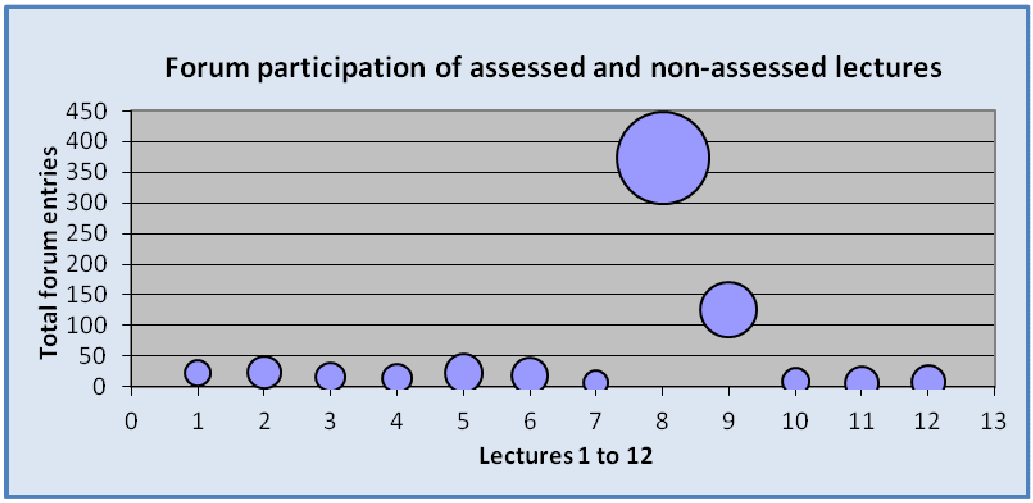

Figure 5. Forum participation by students who accessed the interactive podcasts.

The data shown in (Figure 5) were gathered to test the second assumption (A2): *Social presence will lead to communication and active participation.* Dissimilar to the findings outlined above, the results presented below are not as clear. At a first glance they do not support the assumption, but an interrogation of the data for Lectures 8 and 9 suggest a more complex picture.

Assumption 2 expected that students would, once 'present' (and listening to the podcast), be willing to engage in some form of dialogue with their peers about the topic or issues presented. However, the proportion of participation in the online forum by students who accessed the respective interactive lecture podcasts was generally low (ranging from 23% to 68%), except for Lectures 8 and 9 (ranging from 79% to 87%). This graph shows similar sized bubbles for all interactive podcasts that did not attract assessment marks (see Figure 5). Thus, there was a steady pattern of engagement with the forum activity by a minority of students (between 25 to 50) who had accessed the interactive podcasts. Whereas 50 students engaged in some form of dialogue on the topic introduced in Lecture 5 (lesson planning), the topic discussed in Lecture 11 (reflective teaching), attracted only 26 student comments, some of which were simple notes of agreement with views expressed by others.

The pattern of moderate forum contribution (up to 22% contributions) changed to medium or even high levels of forum activity engagement for Lectures 8 and 9, which showed much higher degrees of student-to-student interaction (between 50-93%). The significantly

higher number of entries recorded for these lectures represent mainly multiple postings from a core group of students (125 students for Lecture 8 and 53 students for Lecture 9), who seemed to engage in some dialogue with each other, resulting in significantly greater bubbles for the two assessed lectures.

The forum activity log for Lecture 8 presents a significant finding, confirming to some degree assumption two (A2: *Social presence will lead to communication and active participation.*). It recorded 374 entries, indicating that a considerable number of students posted multiple entries, signifying patterns of meaningful interaction and multi-level dialogue. However, it is noteworthy that Lecture 8 did not conform to the customary lecture format. It introduced a somewhat controversial topic (teacher merit pay) through a four-part video production of a televised Q&A debate session (SBS, Insight Program, 2007).

Figure 6. Student comments on Lecture 9.

Lecture 9, which was an introduction of 'Bloom's taxonomy of learning', presented as a CAMTASIA recording, utilising a customary lecture PowerPoint format (vodcast), attracted less interest and postings. Nevertheless, Lecture 9 recorded the second highest number of student entries, with a total of 126 postings logged (39%) for the 13 dialogue and exchange tasks (see Figure 2). Even though less than half of the student population posted a comment,

entries were very positive and insightful (see Figure 6). Significantly, the exclusively online provision of the two lectures, which attracted a negligible amount of reward for access, had some impact on participation in the forum. Therefore, it may be possible that there is a relationship between social presence and students' willingness to provide an entry on their immediate reaction, which may lead to a learning exchange or dialogue at a later stage.

6. Discussion and conclusion

The analysis of the frequency of access of the interactive lecture podcasts and the pattern emerging provide interesting indications of students' ability and willingness to engage in online forum activities as one form of active participatory learning. The majority of students (87%) in this study clearly display an ability to engage with the interactive lecture podcasting set up as a short LAMS sequence. It is not known why 13% of students did not register any entries in LAMS. Although a small number of students reported technical difficulties, the 282 student entries recorded for Lecture 8 suggests that most of the first-year students who were unfamiliar with learning management systems were able to overcome initial difficulties and gain access to the online information. More importantly, the results, as illustrated in Figures 4 and 6, suggest that students' willingness to participate in online work is closely tied to the extrinsic reward that the participation attracts, irrespective of the amount of reward granted. In other words, if there is an assessment mark attached to access of online work, students are generally much more willing to engage with this learning medium. The incentive that the online learning tasks are closely related to the end-of-semester exam questions did not seem to alter the pattern of access. Thus, a small number of students engaged with additional support structures for the promise of better learning; whereas the majority of students did so for fairly minimal assessment points (see also Goodyear & Ellis, 2007).

The purpose of the present study was to consider the utility of interactive lecture podcasting. The patterns in student online learning behaviours seem to disconfirm two of the three assumptions outlined at the beginning of the study (A1: *Willingness to access interactive lecture podcasts;* A2: *Social presence will lead to communication and active participation;* A3: M*inimal difference between participation in or engagement with assessed and non-assessed interactive podcast.* The data for the second expectation are mixed and seem of most value. It may be possible that 'social presence' induces peer-to-peer interaction and a deeper engagement with the learning information presented. This study may prove useful and the topic of the utility of interactive lecture podcasting demands further investigation.

Although it was disappointing that students were not motivated by the promise that participation in the interactive lecture podcasting sessions would give them a competitive edge in the examination performance, the finding that the strategy to link the forum activity with exam preparation was not successful in encouraging students to engage in learning dialogues with their peers, is important and warrants further investigation and greater understanding. Studies conducted by Dawson (2006) and Dobozy (2009) found that HE students were reluctant to engage in online dialogue. Supporting Goodyear and Ellis's (2007) analysis, this preliminary study showed that this pattern changes when assessment points are attached to the activity. In one sense, this finding is disturbing because it shows a lack of understanding of the value of intrinsic motivation to learn in pre-service teachers, who very soon will be attempting to engage students in learning. The discrepancy between podcast access and forum activity participation in interactive lecture podcasting sessions that attracted small rewards, and those that attracted no explicit rewards was surprising. One could hypnotise that behaviour reflects a dependency on extrinsic motivation and teacher-directedness. This issue could be investigated in future research, by asking the students what motivated them to participate in sessions that did not attract any extrinsic rewards.

Students may need increasing awareness and maybe even targeted training sessions that demonstrate how the deepening understanding of information exchange will lead to gradual increase in personal as well as collective knowledge. One possible conclusion from this study is that it is difficult for some students to express their opinions in an open forum situation. If so, a way must be found to increase students' willingness to 'have a go' and engage with others' thought processes through online discussion forum exchanges.

It might be that the act of 'writing' one's thoughts is harder than simply 'saying' one's thoughts and so as technologies develop, a speech-based forum might provide a more intrinsically motivating area for students to engage with others' thought processes.

Building an understanding that active participation goes hand in hand with taking increased responsibility for one's learning needs to be a goal for all HE units, especially in the first year. Does this require the granting of participation marks? Maybe. By actively engaging with others' views and opinions, students are signalling that they understand the personal value of intellectual exchange. The potential for learning is, however, not only academic; it is also social and cultural as students unlearn old patterns of 'passive learning behaviour'. Of course, interactive lecture podcasting is only one of a number of tools that can be used to achieve this goal. This study supports views which note that new learning technologies offer potentially radical opportunities for learning (Hemmis, Bayne & Land, 2009) but are also

prone to 'disorienting practice' and 'break down'(Hannon, 2009). More important than a particular technology is system-wide university policy that addresses university expectations of student participation in online learning environments, signalling essential 21st century workplace readiness.

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References

Brown, T. (2006). Beyond constructivism: Navigationism in the knowledge era. *On The Horizon*, *14* (3), 108-120.

Clarkberg, M., Robertson, D., & Einarson, M. (2008). Engagement and student surveys: Nonresponse and implications for reporting survey data. 48th annual forum of the Association for Institutional Research. Seattle, WA: AIR. Available online at: http://nsse.iub.edu/html/index.cfm.

Dawson, S. (2006). Online forum discussion interactions as an indicator of student community. *Australasian Journal of Educational Technology*, *22* (4), 495-510.

Dobozy, E. (2007). The digitalisation of pedagogy: Dressed-up consumerism, techno-utopianism or genuine benefit? Refereed Proceedings of the annual international *Australian Association for Research in Education* conference, Fremantle: University of Notre Dame. www.aare.edu.au.

Dobozy, E., & Pospisil, R. (2009). Exploring flexible and low-cost alternatives to face-to-face academic support. *Teaching English with Technology*, *9* (2), 73-92.

Dobozy, E. (2009). Learning 2.0: How willing is the next generation of teachers to embrace flexible online learning? *Refereed proceedings of the annual international EDUCAUSE Australasia conference*. Perth, 3-6 May. http://www.caudit.edu.au/educauseaustralasia09/program/abstracts/tuesday/Eva-Dobozy.php

Dixon, R., Dixon, K., & Axmann, M. (2008). Online student centred discussion: Creating a collaborative learning environment. In *Hello! Where are you in the landscape of educational technology? Proceedings ASCILITE Melbourne 2008.* http://www.ascilite.org.au/conferences/melbourne08/procs/dixon.pdf.

Downes, S. (2008). Tools. Retrieved from Connectivism & Connective Knowledge. http://ltc.umanitoba.ca/connectivism/?p=59.

Gattis, L. (2008). Getting started with instructional podcasting. *Journal of the Academy of Business Education 9* (4). http://www.abe.sju.edu/proc2008/gattis2.pdf.

Goodyear, P., & Ellis, R. (2007) Students' interpretations of learning tasks: Implications for educational design. *Proceedings of the ASCILITE 2007 conference*, Singapore 2007. http://www.ascilite.org.au/conferences/singapore07/procs/goodyear.pdf.

Hannon, J. (2009). Breaking down online teaching: Innovation and resistance. *Australasian Journal of Educational Technology*, 25 (1), 14-29.

Heiner, C., Heffernan, N., & Barnes, T. (2007). Educational Data Mining. *Supplementary Proceedings of the 12th International Conference of Artificial Intelligence in Education*. Marina de Rey, CA, July 2007.

Hemmis, A., Bayne, S., & Land, R. (2009). The appropriation and repurposing of social technologies in higher education. *Journal of Computer Assisted Learning, 25* (1), 19-30.

Katz, J. (2001). Analytic Induction. In N. Smelser & P.B. Baltes (eds.), *International Encyclopaedia of Social and Behavioural Sciences* (pp. 480-484) . Amsterdam, NL: Elsevier.

Katz, J. (2003). On the rhetoric and politics of ethnographic methodology. *ANNALS of the American Academy of Political and Social Science (AAPSS), 595* (4), 280-308.

Kelly, S. (2009). Social identity theories and educational engagement. *British Journal of Sociology of Education, 30* (4), 449-462.

Kim, K. & Bonk, C. (2006). The future of online teaching and learning in higher education: The survey says … *EDUCAUSE Quarterly*, *29* (4), 22-30.

Kim, K., Bonk, C., & Teng, Y. (2009). The present state and future trends of blended learning in workplace learning settings across five countries. *Asia Pacific Education Review, 10* (3), 299-308.

Kirkwood, A. (2008) Getting it from the Web: Why and how online resources are used by independent learners. *Journal of Computer Assisted Learning*, *24* (5), 372-382.

Jones, K. (2004). Mission drift in qualitative research, or moving toward a systematic review of qualitative studies, moving back to a more systematic narrative review. *The Qualitative Report.* 9*(1)*, 95-112.

Larkin, H. (2010). "But they won't come to lectures ..." The impact of audio recorded lectures on student experience and attendance. *Australasian Journal of Educational Technology, 26* (2), 238-249.

Lonn, S., & Teasley, S. (2009). Podcasting in higher education: What are the implications for teaching and learning? *Internet and Higher Education, 12* (1), 88-92.

Maddux, C. (2009). (ed.). *Research Highlights in Technology and Teacher Education.* Chesapeake, VA: Society for Information Technology & Teacher Education (SITE).

Martyn, M. (2007). Clickers in the classroom: An active learning approach. *Educause Quarterly*, *2*, 71-74.

Mitchell, C. (2006). Case and Situation Analysis. In: T.M. Evans and Don Handelman (eds.), *The Manchester School: Practice and Ethnographic Praxis in Anthropology* (pp. 23-43). New York: Bergham Books.

Nagda, B., & Gurin, P. (2007). Intergroup Dialogue: A critical-dialogic approach to learning about difference, inequality, and social justice. *New Directions for Teaching and Learning*, *111* (4), 35-45.

Nokes, T. (2009). Mechanisms of knowledge transfer. *Thinking & Reasoning*, *15* (1), 1-36.

Peng, H., Su, Y., Chou, C., & Tsai, C. (2009). Ubiquitous knowledge construction: mobile learning re-defined and a conceptual framework. *Innovations in Education and Teaching International*, *46* (2), 171-183.

Porter, S. & Umbach, P. (2006). College major choice: An analysis of student-environment fit. *Research in Higher Education, 47*(4), 429-449.

Ratcliff, D. (2001). Analytic induction as a qualitative research method of analysis. http://don.ratcliff.net/qual/analytic.html.

SBS (2007). Insight Program: The teacher test. Broadcast 26.09.2006.

Schunk, D., & Zimmerman, B. (2007). *Motivation and Self-regulated Learning: Theory, Research and Applications.* New York: Routledge.

Shantikumar, S. (2009) From lecture theatre to portable media: Students' perceptions of an enhanced podcast for revision. *Medical Teacher, 31* (6), 535-538.

Siemens, G. (2006). Connectivism: Learning and knowledge today. Global Summit 2006: Technology connected futures. Sydney, NSW: education.au limited. www.educationau.edu.au/jahia/Jahia/home/.

Weller, M. & Conole, G. (2007). The Open University Learning Design Project. In L. Cameron, A. Voerman and J. Dalziel (eds.), *Proceedings of the 2007 European LAMS Conference: Designing the future of learning* (pp. 65-72). Greenwich: LAMS Foundation.

Wisker, G., & Robinson, G. (2009). Encouraging postgraduate students of literature and art to cross conceptual thresholds. *Innovations in Education and Teaching International*, *46* (3), 317-330.

Zhao, C. & Luan, J. (2006). Data mining: Going beyond traditional statistics. *New Directions for Institutional Research, 131* (2) 7-16.