Encouraging Student Participation in an On-line Course Using 'Pull' Initiatives

Paul Peachey, Paul Jones, Amanda Jones
University of Glamorgan UK
ppeachey@glam.ac.uk
wpjones1@glam.ac.uk
ajones14@glam.ac.uk

Abstract: This paper presents an empirical study involving initiatives that encouraged students to log onto online courses in entrepreneurship delivered by the University of Glamorgan. The aim of the research was to explore items of interest to the online students that may increase participation in the forums and hence potentially enhanced engagement with the course module. The online tutor created additional forums within the discussion board of the virtual learning environment (VLE) that included a variety of online games and quizzes that were relative to the module topic. The rationale that underpinned this initiative was to reduce the possible blandness of the VLE as perceived by some students. The games and quizzes were carefully designed to enhance knowledge in the subject and thereby provided additional learning opportunities. The initiative was also thought to assist in the formation of an online learning community. The study involved experimentation by the online tutor with subsequent observation of the behavioural patterns of the students. In one module, the dedicated social and games forums attracted 54% of the total postings for the module. The findings suggest that including online quizzes and games that are relevant to the taught subject can increase the participation levels of the students and possibly enhance the learning process. The findings of this study may inform the design, development and delivery of online learning programmes. The findings also inform strategies of good practice in online moderation and may help to reduce withdrawal rates, which are typically high in the field of e-learning (Potashnik and Capper, 1998).

Keywords: Virtual learning environment, Fun, Discussion forum, Participation, Games

1. Introduction

Increasing numbers of educational institutions are embracing the idea of delivering courses that are partly or extensively delivered online (Palloff and Pratt, 2001). Despite initial enthusiasm, e-learning has been subject to adverse attention in recent years due to some large projects that have borne the publicised stigma as 'costly failures'. The British Government's *e-University* is a prime example (Guardian Unlimited, 23 May, 2005). Various criticisms and concerns in e-learning have been forwarded by a number of scholars. Peters (1993) fears that distance education often adopts a mass production philosophy and benefits that may be derived from the face-to-face classroom are consequently lost. In a similar vein, Noble (2002) warns that distance education is becoming a commodity. These arguments infer that the transactional distance between the tutor and the learner is increasing. However, Valenta and Therriault (2001) refer to evaluative studies whereby students involved in distance education spoke of having experienced *increased* individual attention from their tutors. The perception of a widening gap between the students and tutor could be morally damaging to these typically non-traditional students that find themselves immersed in a means of study that may be totally unfamiliar to them and hence generate 'virtual anxiety', especially in the case of technophobes. Rheingold (1995) discusses the negative impact of this anxiety and includes the participants' fear of how

their postings might be perceived by other users. Indeed, a study by Peachey (2004) found that 57% of [non-traditional] students that had completed an online course experienced significant levels of initial trepidation in posting their first messages to the discussion forums. All of these students said that they were anxious as to how their messages would be perceived by their [unknown] peers. This is exacerbated in fully online courses as face-to-face contact plays a significant part in the process of socialisation (Jones and Peachey, 2005). Students might also experience a sense of isolation that may erode their personal motivation levels ultimately leading to possible withdrawal from the course. For example, Purcell-Robertson and Purcell (2000) believe that a medium that involves the student sitting alone at a computer can invite feelings of disconnectedness from the learning. In a research study of 427 students who enrolled on online courses between 2001 and 2003 delivered by the University of Glamorgan and its partner colleges throughout Wales, 20% of the students spoke of having experienced a sense of isolation and regarded this as the main negative issue in their online study. A further 14% of the online students regarded the lack of face-to-face interaction as the main shortfall (ECW, 2003). These findings are consistent with the experiences of online students in a study highlighted by Neal (2005) who found that students did perceive collaborative interaction as 'fun' but not isolation or online anxiety. Neal also revealed that online teachers themselves

also experience similar online trepidation and that the teaching becomes less enjoyable when there is some discomfort. Finally, Neal argues that formalisation can undermine the sense of fun and consequently impact negatively on the perceptions of the online students.

Hence, it is clear that formal learning in an online course carries unique problems and there is scope for lateral thinking and innovative actions as inspirational drivers. This paper presents an empirical study that involves a paradigmatic shift from 'push' to 'push and pull' strategies in encouraging student participation in the online environment. It was hoped that the online students will feel that they *want* to log on and not feel that they *have* to. The aim of this study was therefore to explore items of interest to the online students that might encourage them to participate in the online forums of the VLE, i.e. to apply a push and pull as opposed to a push strategy.

1.1 The background and context

As part of the Entrepreneurial Action Plan (EAP) initiative delivered by the National Assembly for Wales (UK) and partially funded through the European Union's Objective One strategy, the University of Glamorgan formed 'E-College Wales' (ECW). The main aim of this innovative initiative was to contribute to the regeneration of businesses in Wales by way of an accredited training programme in entrepreneurship that was accessible to candidates throughout the Objective One areas of Wales. This initiative involved a major investment in e-learning and led to the development of a number of undergraduate and postgraduate business enterprise courses at the University of Glamorgan. ECW claims to be one of Europe's largest online learning projects and over 1000 students throughout Wales have already embarked on these courses since 2001. The courses were delivered almost entirely online by the University of Glamorgan and partner colleges across Wales and were as follows:

Undergraduate:
- Higher National Certificate (HNC) in Business Enterprise
- Foundation Degree (FD) in Business Enterprise
- Bachelor of Arts (BA) in Business Enterprise

Postgraduate:
- Master of Arts in Professional Development (MAPD)

This study focuses on three undergraduate modules, namely the Level 2 modules:
- Small Business Planning (EB2S03)
- Developing Small Business Marketing Communications (EB2S08)

And the Level 3 module:
- The Entrepreneur and Society (EB3S09)

These courses were modular in structure with each module being 9 weeks in duration. Three modules could be delivered in one academic season for part-time students and 6 modules for full time students who would study 2 modules concurrently. The online courses offered '24/7' flexibility and the mean age of these non-traditional students was 37 years. The typical student retention rate of these online courses was around 50%. The virtual learning environment (VLE) platform that was to support the programme was Blackboard©. Course materials were accessible online and students had links to electronic database journals and library catalogues. Students were also able to interact with their peers and moderator via the VLE communications facilities primarily by means of the discussion boards within the forums (refer to Figure 1).
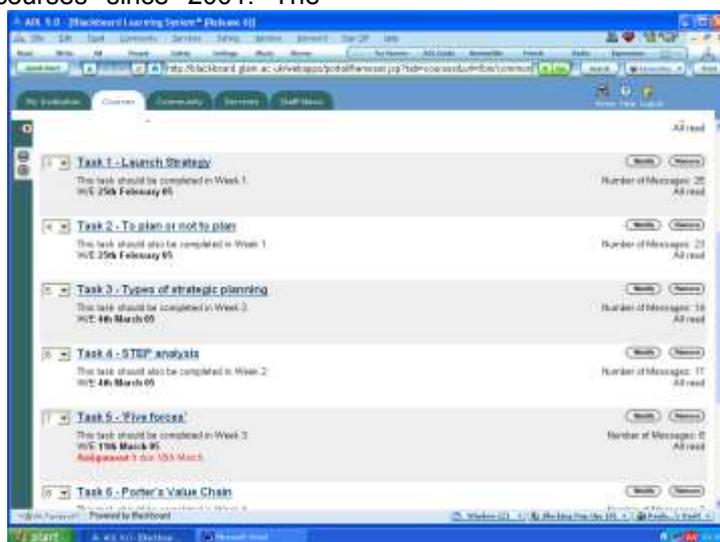
Figure 1: Example of the multiple forums set up by the on-line moderator

The assessment was centred round two coursework assignments that were electronically submitted by means of the Blackboard© VLE communication facilities. In order to persuade the students to engage with the course material, a series of tasks were posted within separate forums of the discussion board of the VLE (as shown in Figure 1) where each task is set within its dedicated forum. The students were encouraged to participate and complete each of these tasks that were entirely relevant to the learning objectives of the course module. However, completion of these tasks was *not* an obligation and there was no penalty applied for non-participation. Indeed, it was commonly found throughout the ECW programme that some students failed to address any of the set tasks preferring only to submit the coursework.

Both instructivism and constructivism were adopted as viable pedagogical concepts to underpin these courses. The Blackboard© forums would address the socio-constructivist element by affording interaction among the group. These forums were entirely text-based in nature. The instructivist component involved the development of web-pages that housed the course material.
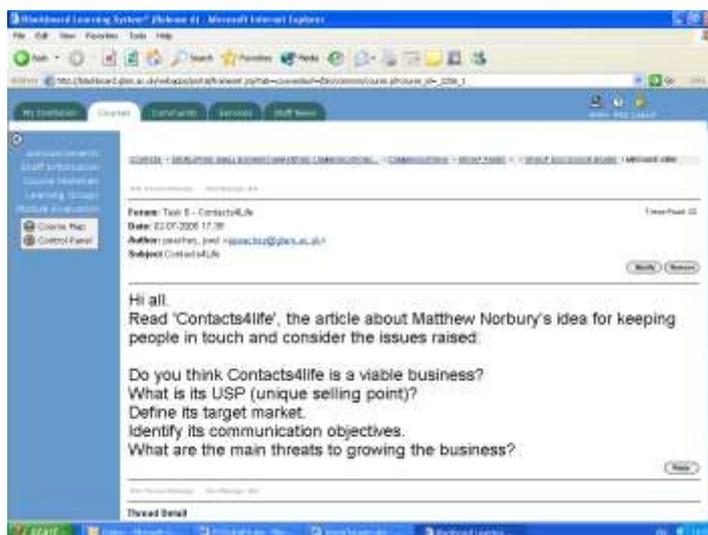
Figure 2: Typical opening task messages as posted by the on-line moderator

Figure 2 represents a typical task found in the level 2 'Developing Small Business Marketing Communications' (DSBMC) module. The students were required to respond to the initial task message posted by the online moderator. The moderator would then endeavour to facilitate a discussion around the topic. A common complaint forwarded by the online students was that the text-based environment was inherently bland. The web pages that housed the course content were also text-based but did include some animation as shown in Figure 3.

Figure 3: An example of an animated sequence within the course materials pages

Students who appeared to be absent from the discussion boards of the VLE forums for a predefined period were contacted via email or telephone and encouraged to participate. A common pattern that emerged was that the online students responded by immediately posting just one or two messages, but the status quo soon prevailed and the cycle continued. This 'push' tactic is problematic in that the student might feel pressured to participate potentially leading to uncomfortable negative experiences such as stress, anger, frustration or guilt. These emotions could discourage the student in continuing the course and the strategy offers no guarantee that the student will further engage with the course material.

2. A review of the literature

In the literature, there is a distinct paucity of research into push / pull factors that encourage student participation in the online environment. In the context of an online course, there are few references to gaming, quizzes and similar online learning activities although these are frequently found in the face-to-face classroom. A course centred round 'electronic page-turning' harbours particular weaknesses as Cohen and Ellis (2001) notes:

> *Online teaching and learning classes with extensive reading / discussion formats without synchronous meetings, the use of videos, or interactive experiences (group activities) online learning quickly became boring (p.142).*

Kear (2004) discerned that many Open University students studying the T305 course failed to participate online having been put off by having to read so many messages and Race (1994) discusses the goals that feature in a 'complete' learning environment:

> *The primary goal of creating a complete learning environment is to create a situation where the instructional objectives can be met. A secondary goal is to create an environment that is fun and exciting to use, (p.140).*

Race's dichotomous perspective of the goals misses the point that some students may withdraw from the course if they fail to be motivated and the primary goal consequently cannot be realised. Parker (1999) argues that interaction not only increases students' motivation but also introduces a positive perception of the course. Stefanov, Stoyanov and Nikolov (1998, p.85) posit that the "*development of effective interactive learning environments will motivate and engage the learner*" although it is argued that

the use of the term 'will' in their statement is underpinned by a very bold assumption. Interaction levels between the online moderator and the students, and among the students themselves requires a mediating tool: "*Just expecting students to start debating online is like putting students into an empty room, closing the door and telling them to get on with it*" (Fox, 2001, p.58). Canning (2002) outlined some of the difficulties in initiating and maintaining learner-learner interaction in a study of an online course. Canning found that the tutorial staff made many valid attempts to initiate interaction among the student group but this failed to materialise essentially due to student indifference. Canning does not elaborate on the tactics used by the tutorial staff and hence it remains unclear whether push or pull initiatives were used in this instance.

Items of interest to the online students coupled with additional learning opportunities and the prospect of vibrant interpersonal interactivity (for students who desire social interaction) is an ideal that could address many of the mentioned problems. According to Blanchette (2001), questioning techniques can afford opportunities for interaction and learning. The *modus operandi* may manifest online as a strategy consisting of activities involving crosswords and quizzes. This approach soundly embedded in a non-threatening online atmosphere, is a possible step in the right direction.

3. Research methods

This research involved an ethnographical study of the behaviour of the online students in their response to 'experimental' forums that were included in the Blackboard© discussion board. Blackboard© has facilities for capturing the number of logons (hits) and these data were analysed accordingly. The number of postings made by each student was also manually counted and recorded.

Of the 3 online modules that were subject to this research, the experimental forums were added to 2 of these modules with the third module acting as a control. All of these 3 modules formed part of the BA Enterprise online course. Both the 'Developing Small Business Marketing Communications' (DSBMC) and 'Small Business Planning' (SBP) were level 2 modules and 'The Entrepreneur and Society' (ES) module was a final year (level 3) module. The level 2 students studied both the DSBMC and SBP modules concurrently. The experimental forums were added to the DSBMC and ES modules and the SBP module was used as the control reference.

Three hypotheses were tested in this study:

H1 - The students would participate more willingly if a series of light-hearted online games and quizzes relevant to the learning objectives for the module were integrated into the programme.

H2 - The students would participate more willingly if the online moderator made concrete efforts to create a social and informal environment.

H3 – The students' participation levels would be generally lower in the control module than the experimental modules.

The level 2 students were informed beforehand that the moderating styles would differ between the two modules of which they were studying with additional items applied to the DSBMC and ES modules to augment the learning process.

3.1 The strategies

The online moderator applied a 'push and pull' initiative to the ES and DSBMC modules in order to create extra interest for the online students. The push and pull strategy comprised the following elements:

- The development of an informal and 'comfortable' environment for the students to reduce possible anxiety
- The building of an online 'community'
- The reduction of possible blandness by introducing a series of games and quizzes to the modules that were relevant to the learning objectives

- The bestowment of high levels of praise and encouragement to the students
- The application of a social element to the module
- The use of coloured font and photographs within the prose

The online moderator de-formalised the experimental forums by posting socially oriented messages and discussed personal issues such as his family, his hobbies, etc. Light humour was also included in these forums as a de-formalisation tactic (Lewis and Allen 2005).

A typical 'push' strategy was applied to the SBP control module. This push strategy involved adherence to the doctrine of 'good practice' in online moderation as recommended by a set of directives published at the University of Glamorgan as part of its Quality Assurance policy. This QA doctrine included guidelines such as logging on regularly, offering prompt feedback, contacting students and advising accordingly when their participation levels fall, and so forth. These guidelines were stringently followed in all of the modules. It was imperative in ethical terms that this research study was not detrimental to the students and the accomplishment of the learning objectives for all modules remained of paramount importance.

The two special forums added to the DSBMC and the ES modules are shown in Figure 4.
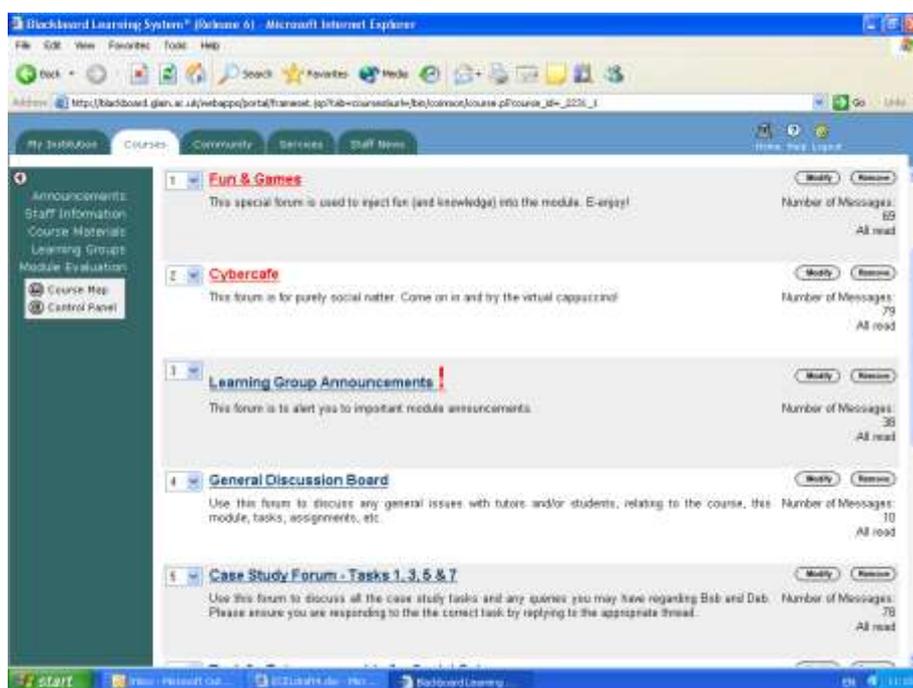
Figure 4: The forums of the ES module

71

In both the DSBMC and the ES modules, a forum was specifically set up to satisfy the social aspirations of *some* students. This forum was a general asynchronous 'chat' forum whereby the students could discuss anything of interest to them provided the ground rules regarding online etiquette were followed. Although the intention was that the students would take ownership for this forum, it was decided that the online moderator would be allowed access in order to facilitate the discussions and keep the forum 'alive'. A forum was also added whereby students could access the online quiz.

In both the experimental DSBMC and ES modules, the additional socially oriented forum was titled the 'Cybercafe' and the games forum was titled 'Fun and Games' (as shown in Figure 4).

The opening message posted for the SBP control module was informative, relatively formalised and entirely text-based. However, the DSBMC and ES modules adopted a more informally tone and made use of coloured font. There was no obligation for the students to participate in these additional forums. A photograph of the online moderator was added to convey a personal touch (refer to Figure 5).

Figure 5: The opening statement for the ES module

Activities such as a content-related crossword and a content-related bingo quiz were accessible to the students. The objective of this action was to increase the student engagement with the course module by offering items of possible interest.
A couple of small prizes were added to instil a sense of authenticity and to add to the fun. The quiz was entitled 'Quiz Bingo' whereby each student was randomly allocated 6 letters of the alphabet on an 'electronic bingo card'. Twice weekly the online moderator posted a question within the Fun and Games forum. Once a student responded with a correct answer to the question, a randomly drawn letter of the alphabet was released to all of the online students. Once a

student had acquired all of the letters on his/her 'electronic bingo card', he/she would then post a claim and win the prize. Many of these questions required the student to revert to the course material to seek the solution. Once the correct solution was posted, the online moderator would initiate a discussion on the topic that was relative to the question (refer to Figure 6). In addition to the quiz bingo game, a crossword was also designed to address the same participation and learning objectives as the quiz bingo and was successfully completed by a student in a surprisingly short time despite the relatively high difficulty level of the crossword clues.
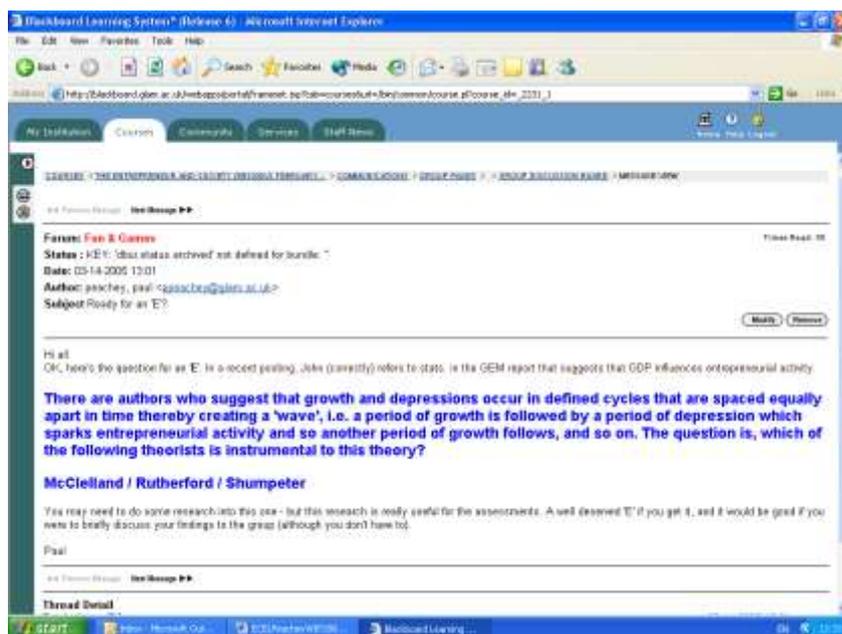
Figure 6: Typical question for the 'Quiz Bingo' game

4. Findings

In the ES module, 7 students were active online (3 male, 4 female). The task forums attracted a total of 544 posted messages with an additional 148 posted messages directed at the special 'Fun and Games' and 'Cybercafe' forums. Ignoring all postings made by the online moderator, the students posted 270 messages to the task forums and 92 messages to the special forums. Hence, the special forums attracted 27% of the total student postings for the module. In the DSBMC module, 12 students were active online (3 male, 9 female). The task forums attracted a total of 251 posted messages with an additional 136 posted messages directed at the special 'Fun and Games' and 'Cybercafe' forums. Ignoring all postings made by the online moderator, the students posted 46 messages to the task forums and 64 messages to the special forums. Hence,

the special forums attracted 54% of the total student postings for the module. Refer to Table 1.

Table 1: Details of number of postings made to online forums for each module

Forum	Tasks		Fun and Games / Cybercafe	
Module	Students	Moderator	Students	Moderator
ES	270	56	92	56
DSBMC	46	40	64	60
SBP (Control)	41	26	n/a	n/a

Other forums were also included, namely 'Announcements' and 'Revision'. These forums were purely informative and non-interactive and hence these forums were not subject to this study. The responses to the quiz questions were relatively swift. A response by a student to the question posted in Figure 6 was received later that same day (Figure 7).

Forum: Fun and Games   Times Read: 22

Status : KEY: 'dbui.status.archived' not defined for bundle: ''

Date: 03-14-2005 14:51

Author: (*Removed to retain anonymity*)

Subject Re: Ready for an 'E'?

Hi,

http://www.tutor2u.net/economics/content/topics/econgrowth/benefits_of_growth.htm

I think Shumpeter is the answer....
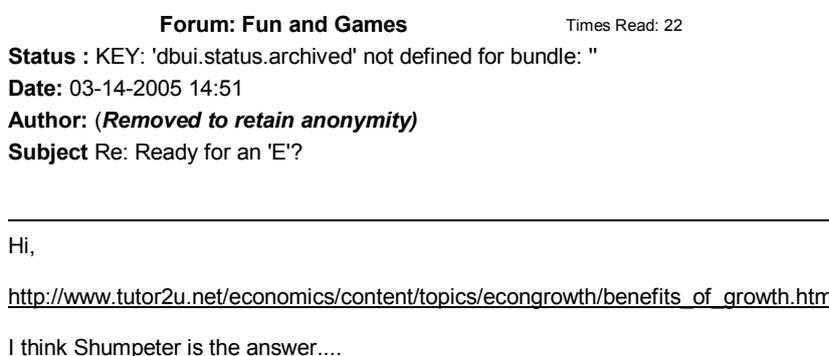
Figure 7: A student's response to the question in Figure 4

The online moderator then sparked a discussion regarding the work of Schumpeter. It was found

that some students were considerably more active in the Fun and Games forum than the task

forums. For example, one student posted 27 messages within the Fun and Games forum but only 6 messages in the task forums. Furthermore, the quality of the response to a quiz question as seen in Figure 8 suggests that some students appeared to be engaging significantly with the course materials.
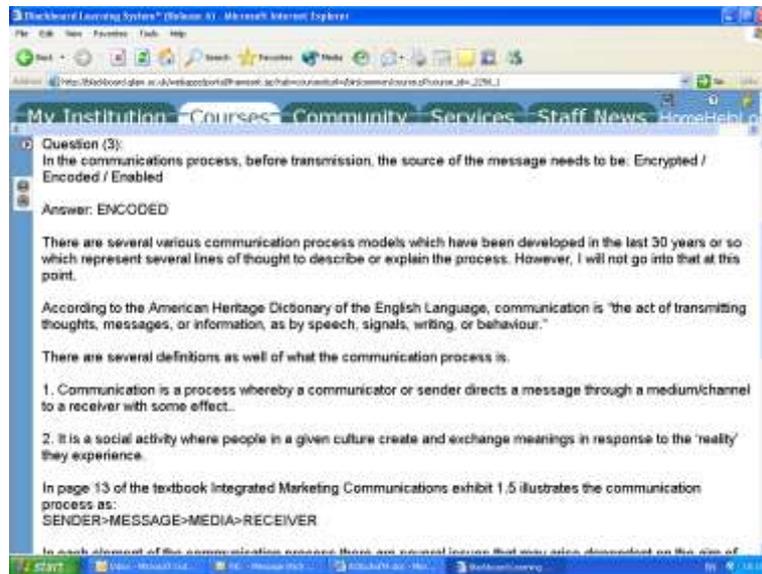

Figure 8: A student's 'articulate' response to a quiz question in the DSBMC module

The statistical data regarding the number of web-page accesses (hits) made by the students during the 9-week duration of each module was drawn from the Blackboard[©] VLE and graphically presented in figures 9, 10 and 11.
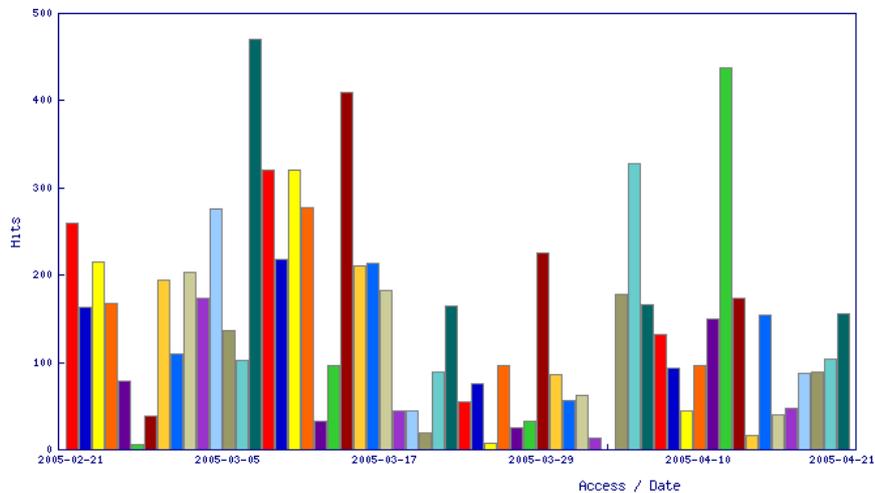
Figure 9: Activity levels (hits) of the DSBMC module
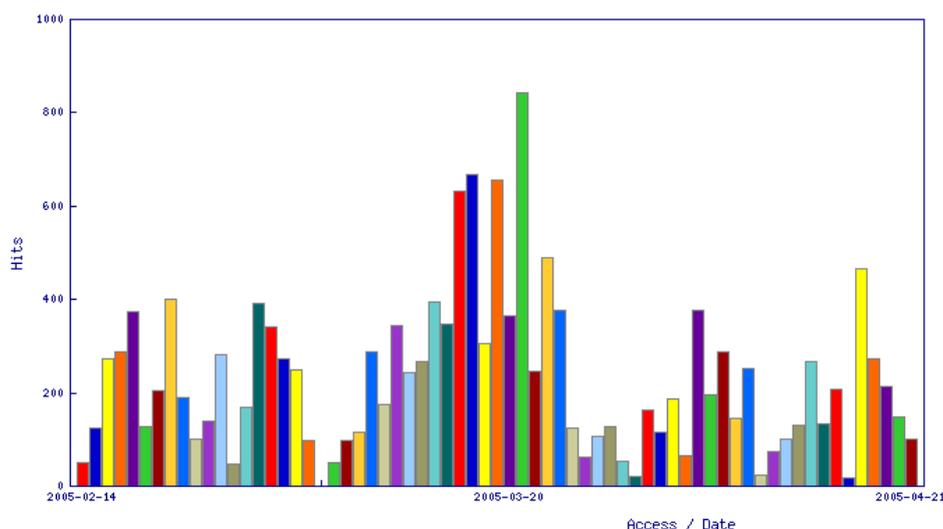
Figure 10: Activity levels of the ES module

What is noticeable about the graphs in Figures 9 and 10 are their relatively horizontal profiles. Both of these modules were core modules and had the same student population albeit at different levels.

The graphical representation of the students' participation on the SBP control module is shown in Figure 11.
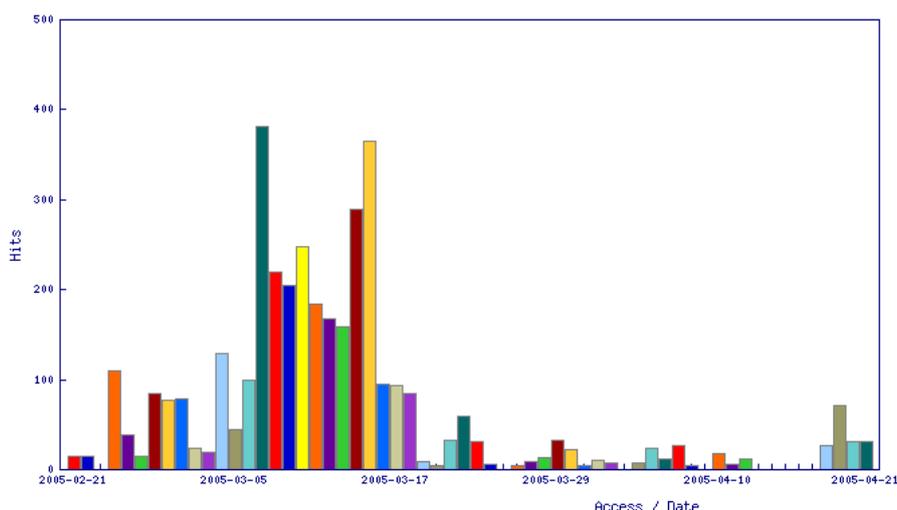

Figure 11: Students' participation levels for the SBP module

There is a stark difference in the graphical profiles between the DSBMC and SBP modules although the level 2 cohort studied both modules concurrently. After a period of relatively high levels of activity, the initiative appeared to be lost and failed to pick up again afterwards. This was not the case in the ES and DSBMC modules where participation levels of the students were relatively consistent throughout the module. No evidence emerged in the students' assignment scores that suggested a difference in the learning acquired from the DSBMC and SBP courses.

4.1 Student comments

The online moderator endeavoured to apply an informal approach, encourage and motivate the

students, and instil a sense of excitement and fun in the experimental modules. At the end of these modules, some of the students posted messages spontaneously within the forums directed at the online moderator. These student responses were positive (and flattering):

'And a big thank you Paul I'm sure we all wouldn't have engaged in the topic with such fervour if it hadn't been for your 'enthusiasm' in leading the module topic.......(ES student, posted 15/05/05)

'I agree. I've really enjoyed working with you Paul!'(ES student, posted 25/05/05)

'Well I don`t know about anyone else but I think Paul is a fantastic leader who motivates from the start and makes it more

interestingThanks for all of your support during this yearHope to see you next year for more encouragement.'(DSBMC student, posted 12/05/05)

It was noticeable that no such comments were posted to the forums of the SBP control module.

4.2 Limitations

It needs to be acknowledged that there are a number of variables that might influence the findings. For example, the apparent success of the DSBMC module as opposed to the SBP module might be attributed simply to the students' preference for the subject of marketing over the subject of business strategy. In addition, there were a number of unique benefits for Objective One students that are thought to influence the enrolment and persistence of the students. These benefits included no fees for the course or the online activity and the loan of a free laptop for some students. Generalisation of the findings is perilous considering the relatively small population numbers in each module.

5. Conclusions

The findings of this study were remarkably consistent with all three hypotheses. To recap:

H1 - The students would participate more willingly if a series of light-hearted online games and quizzes relevant to the learning objectives for the module were integrated into the programme.

H2 - The students would participate more willingly if the online moderator made concrete efforts to create a social and informal environment.

H3 – The students' participation levels would be generally lower in the control module than the experimental modules.

The findings also agree with the findings of Neal (2005) (refer to page 2 of this paper) and suggest that the inclusion of quizzes and games that are wholly relevant to the objectives of the course modules may potentially increase participation of the online students to the discussion forums. Commonly used push factors have proved to be quick fixes to a fundamental underlying problem. In terms of the ECW programme, it is recommended that the typical push strategies should be substituted by a push and pull ideology. The objective is accomplished when the online students feel that they *want* to log on and not that they *have* to. The findings of this study are believed to be of benefit to personnel involved in the design, development and delivery of online courses. Finally, there is a clear need for further evaluative research into the impact on students' satisfaction, learning potential and retention in introducing such 'fun' activities in online courses.

References

Blanchette, J. (2001). Questions in the online learning environment. *Journal of Distance Education*, Vol.16, No. 2.

Canning, R. (2002). Distance or Dis-tancing education? A case study in technology-based learning. *Journal of Further and Higher Education*, Vol. 26, No. 1, pp 29-42.

Cohen, M.S. and Ellis, T.J. (2001). Teaching technology in an online, distance education environment, 31st ASEE/IEEE. Frontiers in Education Conference, Oct. 10–13, Reno.

ECW Evaluation Report, 2003. University of Glamorgan.

Entrepreneurship Action Plan (EAP) Review. 2002/2003. Welsh Development Agency (WDA) Retrieved May 10, 2005, from http://www.wda.co.uk/resources/EAP%20english%20full.pdf

Fox, B. (2000). Teaching online reluctantly. In D. Murphy, R. Walker and G. Webb, (Eds.), (2001). *Online learning and teaching with technology: Case studies, experience and practice*, (pp 55-62). London: Kogan Page.

Guardian Unlimited, 23 May, 2005. Retrieved 18 July, 20-05, from http://education.guardian.co.uk/elearning/comment/0,10577,1490476,00.html

Jones, N. and Peachey, P. (2005). The development of socialization in an online learning environment. *The Journal of Interactive Online Learning*, 3(3), Winter, available online at http://www.ncolr.org/jiol/issues/showissue.cfm?volID=3andIssueID=12

Kear, K. (2004). Peer learning using asynchronous discussion systems in distance education. *Open Learning*, Vol. 19, No. 2, pp 151-164.

Lewis, D. and Allan, B. (2005). *Virtual learning communities: A guide for practitioners*. Maidenhead: Open University Press.

Neal, L. (2005). Elearning and fun: A report from the CHI 2005 special interest group. *Elearn Magazine*, published 7/05/05. Retrieved 30 July, 2005, from http://elearnmag.org/subpage.cfm?section=best_practicesandarticle=31-1

Noble, D.F. (2002). *Digital diploma mills: The automation of higher education*. Toronto: Monthly Review Press.

Palloff, R.M. and Pratt, K. (2001). *Lessons from the cyberspace classroom: The realities of online teaching*. San Francisco, California: Jossey Bass.

Parker, A. (1999). Interaction in distance education. *Educational Technology Review*. Autumn/Winter, pp 13-17.

Peachey, P. (2004). A research study into the characteristics and dynamics of online learning communities involving different underpinning pedagogical frameworks. *Unpublished doctorate thesis*.

Peachey, P**.,** Jones, W.P. & Jones, A. (2005). An empirical study of 'pull' initiatives used to encourage student participation in an online enterprise course. *Paper presented at the 4th Annual Conference in E-Learning, Amsterdam, November 10-11.*

Peters, O. (1993). Understanding distance education. In K. Harry, M. John and D. Keegan, (Eds.), *Distance education: New perspectives*, London: Routledge.

Potashnik, M. and Capper, J. (1998). Distance education growth and diversity. *Finance and Development*, pp 42-45, March. Retrieved 10 May, 2004, from http://www.worldbank.org/fandd/english/pdfs/0398/0110398.pdf

Purcell-Robertson and Purcell (2000). *Interactive distance learning*. In L.K. Lau, (Ed.), *Distance learning technologies: Issues, trends and opportunities*, pp 16-21. Hershey, USA: Idea group Publishing.

Race, P. (1994). *The open learning handbook: Promoting quality in designing and delivering flexible learning, 2nd ed*. London: Kogan Page.

Rheingold, H.L. (1995). *The virtual community: Finding connection in a computerized world.* Reading, MA: Addison Wesley.

Stefanov, K., Stoyanov, S. and Nikolov, R. (1998). Design issues of a distance learning course on business on the Internet. *Journal of Computer Assisted Learning*, Vol. 14, pp 83-90.

Valenta, A. and Therriault, D. (2001). Identifying student attitudes and learning styles in distance education. *Journal of Asynchronous Learning Networks*, Vol. 5, No. 2, pp 111-127.