DEVELOPING A FRAMEWORK FOR THE EFFECTIVE USE OF BLOGS IN FORMATIVE ASSESSMENT

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ABSTRACT

The development of educational technologies has resulted in a fundamental shift in the educational paradigm with learning no longer equating to the assimilation of knowledge transmitted by textbooks and instructors but by personally building and communicating knowledge.

The aim of this paper is to analyse and discuss the importance of infusing blogs as a formative assessment tool in university education. After describing the theoretical aims, design, implementation and evaluation of blogging as a formative assessment tool; the paper supports the argument for the educational use and pedagogical importance of blogging. The paper also highlights potential problems and limitations of the blogging as an assessment tool and provides a conceptual framework for the effective implementation of blogs for enhancing student learning outcomes.

Keywords: Blogging; assessment tool; infusing blogs; formative assessment tool; effective implementation of blogs.

INTRODUCTION

The Web 2.0 age of information technology has introduced a potential force for a paradigm shift in the way we teach and learn. In societies and sectors of education where knowledge instruction has been declarative only and learning has been equivalent to reiterating learned material, there has emerged a big scope for transforming conventional practices by relocating the focus on interactivity and learning outcomes. This is such a vast arena of social technologies (Churchill, 2009, p. 179) like wikis, blogs, podcasting, RSS feeds etc where new methods, new strategies and new standards shall be built. RSS is an acronym of Really Simple Syndication. It means that a learner needs not to visit a particular website every time and scan the entire material again and again. Rather the RSS feed would make available whatever fresh material is added anytime and anywhere. (Cited in Martindale & Wiley 2005, p. 58).

This change has to be pursued with well-informed assimilation of new tools within the conventional dissemination techniques. It has to be matched with both macrolevel and micro-level redrawing of conceptual tools of pedagogy. As the emerging universe of this change is too large, the current paper focuses upon blogs. The use of blogging in education is roughly more than a decade old phenomenon and the period of research on the same is even less. Within this domain, a range of work has already been undertaken. The current paper is built upon this base. The primary method used here is a comparative study of publicly available articles and casestudies which have undertaken empirical studies. By aggregating prior research in this area, a case for the effectiveness of blog use shall be made so that a comprehensive framework can be strengthened for the general use of blogs, particularly in the business studies of higher education students.

The word 'blog' is a contraction of the phrase 'web log' and has been in the popular domain for some years now. To begin with, it is simply an online diary with the facility for a reader to comment.

All the entries on a blog are based on the reverse chronological order along with hyper-linking and embedding of all kinds of charts, pictures, audios and videos (Sim & Hew, 2008). Bogs provide a user with the opportunity to transcend the physical barriers and institute an interactive domain with the world. John Hiler has described the blog as 'the latest disruptive technology', the 'killer app' that has the capacity to engage people in collaborative activity, knowledge sharing, reflection and debate, where complex and expensive technology has failed (Hiler, 2003 as cited in Williams & Jacobs, 2004).

As blogs are a very prominent part of Web 2.0 services, they "provide a perceived transition from static and isolated information chunks to a self-generated and open communication where the authority is decentralized through allowing end-users to use the web space as a conversation field" (Akbulut & Kiyici, 2007, p. 6).

Since the public hosting of blogs have been made free with the launch of Google's service www.Blogger.com and rival sites like those of www.wordpress.com and www.myspace.com, blogging has turned into a phenomenon that has grown into millions of websites and a serious alternative for publishing and journalism. In the last one decade, this explosive growth (Martindale & Wiley 2005, p. 56) of blogging has encouraged a great number of academic initiatives and a serious attempt is under-way to effectively utilize the blogs within the overall pedagogic design. This paper explores the different dimensions of such blogs when they are used a tool of formative assessment.

The primary ones are as follows:

- The kind of change a blog introduces into the learning environment when teaching shifts from a top-down model to a bottom-up model with students becoming participants in knowledge creation rather than being passive recipients.
- Pinning down the quality quotient and sustainability profile of a group practice in the new pedagogic stream of learning.

> The enhancement of blog-induced reflective capabilities so that the task of formative assessment can be substantiated.

The above is a matrix in which the new learning and teaching system evolves. It gives both teachers and students new spaces to intervene in the mutually enriching process of knowledge building. It shifts from a static to dynamic nature because it becomes much more different from a pedagogic straight-jacket. Rather, it becomes an operating system of learning where the basic essentials of teacher-taught relationship become more tangible and substantive.

Assessment is said to be formative when it yields information which can be used by teachers and students "to modify the teaching and learning activities in which they are engaged". Black & William (1998, p. 2) divides the practices that make up formative assessment into five categories including classroom questioning, feedback, sharing criteria with learners, Student peer -and self- assessment; and the subsequent instruction. Formative assessment differs from summative assessment as summative assessment generally marks the end of instruction whereas formative assessment, on the other hand, anticipates further action on the part of the learning group and the instructor.

OBJECTIVE OF THE PAPER

The shift from Web 1.0 to Web 2.0 is just a simple change. It is nearly equivalent to a paradigm shift as the new environment is collaborative and participative (Ehlers, 2009) as opposed to broadcasting. Unlike the one-off summative assessment in the traditional systems, here the formative assessment acquires a major status. Hence, the quality of such a new paradigm assumes increased importance. It is this emergence of an alternative ecosystem of learning that makes understanding of quality issues much important. It is an issue full of both risks and opportunities. The invention of sustainable models of learning and evaluation plays a critical role in the expansion of knowledge sharing. There are certain basic conditions (Ehlers, 2009, p. 303), (such conditions may not be called a fully complete one but it is more or less a representative list of the same) which have to be taken into account regarding the issue of quality in this new environment.

- > From reception to the participation
- > From inspection to the reflection
- > From product orientation through process orientation to performance and competence orientation
- > From planning education for the learner to the planning education by the learner
- > From receiver to the developer of learning materials
- > From the learning island "LMS" to the internet as a learning environment

The integration of blogs as an educational technology is considered as an important and useful tool on the understanding that Web 2.0 learning enables not just life-long learning but also case specific and area specific learning too. This kind of approach is broad enough for different online tools but the blogs are a natural choice as well as a beginning platform of new initiatives because of their widespread popularity and ease of use, particularly in the student community.

They are considered an easy tool for attracting student interest and providing an appropriate orientation. Within the academic domain, they are generally cited as 'edublogs' (Lee & Allen, 2006), full of immense potential for both self-assessment and formative assessment (Chen & Bonk, 2008).

But the relationship between the objectives of instructional design and the nature of blogging is not an easy one because there can be a number of functions that a blog can be used for. Both teachers and students can make use of blogs to cater to different objectives of assessment as they can post online anytime and anywhere, read what others think and interact without any kind of boundaries. The arena of contact is so informal that the instructional design of the classroom can be taken to the virtual realm with an increased number of options of assessment. The procedural issues involved in the use of blogs are varied and complex. They need to be identified first and dealt with a certain framework.

This paper utilises the currently existing works in this direction and makes a comparative analysis so that a sustainable practice of quality assessment around blogging can be strengthened. It aims to establish that a well-articulated framework driven use of blogging can result in higher-order learning.

REVIEW OF LITERATURE

In a case study of an "MBA Blog" at the Brisbane Graduate School of Business (BGSB) the students were blog-engaged with two course units- Macroeconomics and International Political Economy (Williams, 2004). No direct motive or objective was specified but after a period of experimenting for over six weeks, a feedback was collected. The students showed a marked preference for blogging though less than the levels of serious engagement but they supported the increased use of interactivity and peer-review through blogging. There was also a distinctive shift towards reflection among the students and the majority favoured its use in some of the courses taught at the School. In a similar study in the discipline of accounting (Joshi & Chug, 2009 and Hain & Back, 2008), authors highlighted the importance of the learning context through the use of blogs in accounting learning and suggested a marked improvement in their critical learning. The traditional instructional methods created a passive ambience for the learners but social collaborative methods of blogging create a deeper and enabling structure for the students. Blog can not just be used as a teaching tool but as a tool for assessment also. Though a sustained kind of instructor led motivation is essential yet the significance of this technology is very important in today's age.

Despite throwing important leads, precision of the expected output was not of a higher degree as to what kind of specific task can be better carried through blogging. In a similar paper by Smith, Mills & Myers (2008), an experiment was conducted in 2008 to assess all the engineering students of first year in a common course- Sustainable Engineering Practice (SEP) through the use of wikis and blogs. The course was aimed at introducing the students to the profession of engineering and its pursuit in a sustainable context. Three kinds of assessment tasks were given out of which one task was to prepare an online student portfolio through the use of a wiki and a blog.

This task was given the highest weighting of 45% out of the three. Here, the students were to use blogs but they were available to be seen to only the course tutors and coordinators but not to the fellow students. Students were encouraged to comment honestly even to the extent of harsh criticism. In order to make things transparent and methodical, the assessment task was further divided into six subtasks like collecting three relevant news articles related to engineering, a list of online advertisements of jobs, develop a resume/career plan etc. with each section having a clear pattern of marks allocated. The broader response to this entire exercise was quite positive and students showed a distinctive increase in reflective capacity.

Some criticism was also there but students responded on a high level of participation. As a one-off attempt, this could be called a success but the team of course-tutors and coordinators found it a bit difficult to properly assess the students as the number was quite big i.e. 215 and subsequently, the number of responses was also too large. As "blogs are all receiving resources (e.g., video clip, photo, etc.), transforming into desired outputs (e.g., embedded into a blog entry section), and sending these outputs back (e.g., permalink) to external environments," (Kim, 2008, p. 1346), the numerical strength of the students is a critical factor.

The results were much different in a different experiment (Martindale and Wiley, 2005, p. 58-61) where the blog use was found to be very satisfactory by the teachers when the student number was quite small and they belonged to higher levels of both research and training. There was not only a substantive increase in their writing and commenting capability but the quality of interaction also improved. The teachers found that blogging can and should be sustained.

Blogging as an activity occurs in a certain context that determines the limit and nature of the task a blog can accomplish (Joshi and Chugh, 2009). In a different study (*Chen & Bonk, 2008*), the authors found several problems with the assessment, "For example, students complained about the time and effort they had to spend in assessing the postings, students had problems understanding some of the assessment criteria, and students gave each other the highest marks possible..... They concluded that part of the problem could be due to students failing to fully comprehend the instructor's assessment plan, and that students were sitting together when they did the peer assessment, hence making it difficult for them to be objective in assessing the blog postings" (Chen & Bonk, 2008, p.61).

Krause (2005, as cited in Duff et al, 2007) highlights one such context of the first year students when their engagement pivots between three competing tensions. These are program relevancy, 'student as client' (from the marketing and service dimensions of the institution) and 'disciplinary and academic integrity' standards required by academics". It is not an easy task to find an appropriate balance in this triangular situation.

To measure the difficulty of such an expectation, an experiment (Duff et al, 2007) was conducted in the University of South Australia. It was aimed to increase deep learning among the students so that the students can relate their knowledge with the wider context and can theorize around the things.

To make things a bit tangible, a conceptual tool called CIS Quest was used. It consisted of a combination of different elements such as group work through group work, online discussion, blogging and Java Code cracking etc. It was mooted as a triad of generating three levels of engagement: peers, academics and the institution itself. If a student makes a satisfactory relationship with these interrelated cogs, it is assumed that a first year student is on its course of successful graduation. The level of participation in blogging was 100%. It not only provided the emergence of a group culture but also led to the individual creativity. The collective result of this entire exercise was that the retention rate (which was quite low in first year students) increased to nearly 97%.

But is it possible to extend this kind of use of blogging to formative assessment? Orientation of a student may not be unrelated to formative assessment but it is distinctive in nature. It is more confined to developing the interest and motivation of the student. It remains doubtful whether student response would follow the same pattern if they know about the future and deeper use of such an exercise.

There is note of caution (Dunn & Mulvenon, 2009) that

"to use assessment productively to help achieve maximum student success, certain conditions need to be satisfied..... & also posit two conditions ... First, a clear and shared lexicon must be established and shared among all educational stakeholders &..... most importantly, a sound research-validated framework for best practices in formative assessment and formative evaluation must be established to ensure maximum benefits for all those involved".

In another attempt (Kerawala et al, 2009) at guiding the use of blogging in higher education, a framework was tried out.

The authors of the study conducted semi-structured interviews of the students of a Masters Programme of Open University in UK and tried to find their views regarding blogging which was a prescribed activity of their course work. They were asked to put the summaries of four (out of ten) case studies on their blogs and share them with their peers. It was also supported with incentives in terms of extra marks too. The results of the study found that some students used blogging to share, some for oneself, some left the blogging after the course and only a few stayed with blogging after the course.

The authors realized that any structured instructions regarding blogging were not of much use as:

"Guidelines are unlikely to give the students an opportunity to explore blogging and to appropriate it to support their individual requirements. It seems more prudent to offer guidance in the form of questions that students can use as triggers to explore the role of blogging for themselves, within the requirements of their particular course, hence increasing their awareness of the factors involved in blogging" (Kerawala et al, 2009 p.

To make things more specific, a study (Chen, Wu & Yang, 2008) was done to accelerate the effective use of weblogs in enhancing case study-based method within an asynchronous environment. It was aimed utilising the blogging features of active discussion and instant feedback.

As the relationship between the instructors and students was quick and interactive, the complex tasks could be easily handled through blogs. A thorough field study was done in a private university of Taiwan where students were of Management of Information Systems (MIS) majors in their second year of study. All students were expected to complete a case-based study at the end of six-week long assignment. It was a well-conceptually founded study based upon the Unified Theory of Acceptance and Use of Technology (UTAUT) that measured the results in terms of three parameters: Performance Expectancy, Effort Expectancy and Social Influence. It established that blogs have their effective outcome only if they relate positively to these three parameters. But the parameter of Performance Expectancy was the most preferred one in the final outcome as the students wanted to use only that tool that increased their performance first and foremost.

This study is a good one in the sense that it makes a case for making blogs directly relevant to the final outcome of the learning process particularly for the student. This sets a standard and also makes further design of blogging within instructional design a bit challenging.

In another study (Henly, 2003), formative assessment through online tools was used for the first year Dental Sciences students at the University of Queensland, Australia. The purpose was to support student learning and assist students to develop the skills necessary to become lifelong learners.

A large question bank of formative assessment questions was set up using the commercially available package, WebCT1. The questions included short-answer, multiple-choice and extended matching questions. There was a definite enthusiasm for this approach in the beginning but it waned over a period of time. A comparison of the top performing and the bottom performing students showed that the earlier group read the formative assessment questions when compared to the latter group but there was not a very significant difference in the final marks scored by the two groups. Most of the students showed a remarked preference for such a method of formative assessment but their level of participation was not uniformly distributed. Though here, the online tool used was WebCT instead of blog yet the pattern was not much different vis-à-vis formative assessment. The study concluded that;

"It is unclear whether increased use of formative assessment led to improved grades, or merely reflected the conscientious study habits of high achieving students (Henly, 2003 p. 120)".

The problem remains still unresolved how formative assessment through use of online tools can be earmarked as a driver for enhanced evaluative performance level. In a somewhat related experiment (Wang, 2007), a module called Formative Assessment Module of Web-based Assessment and Test Analysis (FAM-WATA) was used to confirm the importance of formative assessment in a web-based learning environment.

It was built through six effective strategies; 'repeat the test', 'correct answers are not given', 'query scores', 'ask questions', 'monitor answering history' and 'all pass and then reward'.

Around 500 students were part of this module testing and the results were quite encouraging vis-à-vis learning effectiveness of the students. To certain extent, this is a good experiment as far as the possible models of formative assessment are concerned. This replaced the pen-pencil and classroom environment totally with an online environment but the experiment does not mention any kind of results vis-à-vis higher order learning or reflective learning. This may be because it was conducted on school students and this was not a part of original objectives. In that sense, this kind of formative assessment went away from orientation to evaluation. Instead of creating motivation and interest, it straight away shifted to calculating the scores. Though the results were not beyond expectation yet the efficacy of such a test cannot be adequately extended to university students. A blog can be given a desired mould by a teacher but it cannot be used as straightly as other web-based learning environments. A blog has certain openness to its design; its access patterns can be changed by the individual users. So, the basic question remains whether it can be put inside a structure of assessment.

So far, we have discussed the positive potential of blogs and social software but there is underside to it. There are some studies which have developed a critique of web-based learning. For example in one paper (Schroder, Minocha & Schneider, 2010), the authors delve into the risks and underside of what they call "social software initiative". They base their studies on the work done in 20 United Kingdom-based institutions and present a SWOT analysis of this broader trend. Though many social applications are taken into consideration here but wikis and blogs are the most used ones in these studies.

Among the strengths of the social technologies, the building of social relationships with increased learning and communication among peer-groups and teachers. The results were not much different to those expected and found in the above-mentioned studies. But the weaknesses highlighted were something new in the currently available literature. The prominent weaknesses highlighted were; first, there was both a substantive and quantitative increase in the workload of both students and teachers. Both of them were walking an extra mile in adapting themselves according to the requirements of web-based learning environment. The conventionally available resources were being supplemented with new tools and everybody needing new learning, attitude and push to pursue something which is yet to a comfort zone. This problem is more enhanced in the cases where social software initiative is more individually-run and less supported by the institution.

Secondly, the virtual domain was not identical with the physical domain because of which interaction was fraught with confusion, misperception and communication gaps. Thirdly, the open domain created the problem of content ownership and assessment as the data was both the result of individual contribution and public comments. The dividing line was not that easy particularly in the case of blogs and wikis. Despite training and support, there were certain communicative problems which could not be envisaged initially. It required continuous interventions that were not possible always.

The study also highlighted certain threats when the applications used were beyond the control of institution. That laid the entire process open to external public. That created the problem of reliability of web-based learning culture over longer periods as data control and privacy issues could be handled with nothing but an actively pursued social code of conduct.

A different study (Schroder, Minocha & Schneider, 2010) though not with blogs attempted to the use the constructivist and collaborative potential of Wikis in the final year class of an under-graduate program but the experiment failed miserably. Though the students were well-aware with the social technologies yet they could not participate in the process because of many reasons like time pressure from other courses, discomfort at using the Wiki interface, lack of interest, lack of any incentive or simply hesitation-cum-confusion. The effort expectation as highlighted in above mentioned paper (Chen, Wu & Yang, 2008) was so high that it did not click. This experiment's failure highlights the problems of devising pedagogy focusing on the learning outcomes. It is not an easy affair to transfer the efficiency of a classroom lecture to an online domain where the connection with the learner and the subject is not as spontaneous as it is in the classroom. To engage a student while he/she is away from the classroom environment is a difficult task. For that, it is very essential to have a set of certain self-motivated students which may not be a reality at the under-graduate level.

The social technologies may create a fast pace of communication but to handle the simultaneous task of differential learning capabilities and knowledge aptitudes of the students over the virtual medium is a complex task and needs multiple kinds of experiments.

SUGGESTIONS FOR A SUSTAINABLE BLOG USE MODEL

First, the utility of blogs is inversely proportional to the age of the students (Smith, Mills & Myers, 2008). Its outcome keeps improving from the school students to under-graduate students, to Masters' students and to graduate students. It is not that it cannot be used at the lower classes but the point is that the problems of assessment cannot be easily pinned down at the lower level. Secondly, the students needed to be initiated into blogging not through a certain fixed number of assignments rather their performance should be linked to more and more usage of the blog system (Farmer, Yue, Brooks, 2008, p. 134). This is not to suggest that there should be no transparency to it rather the intent is that it will free a student from any kind of pressure and also contribute towards the creation of a social and intellectual capital. This is to save the learning process from any kind of mechanical approach too. Thirdly, the degree of control over blogs should be guided by the initial objective which may be orientation, assessment or evaluation or even a combination of the same. There cannot be any fixed data controls in blogging, so the output should be linked to the expectation input. Fourthly, the role of how blogging is intermixed with the instructional design is very critical (Chen, Wu & Yang, 2008 & Wang, 2007). If implemented outside the overall framework of instruction, blogging may be of very narrow use. The sustained role of innovative changes introduced by the teacher can work wonders with the use of blogs. This is equivalently true of how the process of assessment is carried out by the teacher during or before blogging.

Finally, the true domain of blog effectiveness is where a student learning can be observed at a micro-level and this is very evident where case-studies and problem-solving skills are involved.

This is quite noticeable in the case of students of business studies. It not only gives fellow-students a critical edge in development of deeper learning but also underlines the importance of group interaction.

Further, it gives the teacher a scope to evaluate the course design mid-way and introduce any qualitative changes if needed. This kind of learning behavior gives an authentic picture of what an appropriate design can achieve in the context of social technologies.

Of course, the above-mentioned list of elements of framework may not be called an exhaustive list. At the most, it should be called a representative list of fundamental guidelines.

CONCLUSION

The emergence of social software environment changes the learning culture in a radical manner. It drives students not only away from rote-learning but also cultivates them into a mode of learning. It may begin from a teacher-directed process but it does not end with that. Rather, it goes further down and gets diffused among the student community thus making learning a community phenomenon instead of an individualistic one. Not just that, it goes further beyond the objectives of a course design into a broader process of social learning and lifelong practice. This paper has made some suggestions for the sustainable use of blogs in the higher education section. Like all computer assisted learning, the effective utilisation of blogs is essential to enhance student learning and to assess students. Essentially, sustainable use of blogs involves careful planning and effective integration of instructional design in the use of blogs.

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