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**Title**

**SUPPORTING ONLINE LEARNERS WITH NEW AND EMERGING TECHNOLOGIES**

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There has been an increase in the use of Web-based 'collaborationware' in recent years. These web 2.0 applications in particular wikis, blogs, podcasts and facebook are being adopted by many educational institutions. These tools offer the opportunity for powerful information sharing and ease of collaboration. The Distance Education Unit of the Ministry of Education is attempting to use these emerging technologies such as blogs, wikis, podcasts and facebook as a natural element in the tutoring in the National Open School of Trinidad and Tobago. (NOSTT)

It was decided due to financial considerations that these alternative solutions be adopted to deal with students who were out of the natural school system or who had spent limited time in the classroom.

Notwithstanding the apparent digital divide that exists and other issues of accessibility the question of using the appropriate technology was at hand.

It was hypothesized that if learners had additional and easy access to their tutors and to other learners that the collaborative effect would result in greater participation and increased averages.

It is in this regard that a pilot is being run using the technologies in question. These include blogs, wikis, facebook, illuminate vroom.

Wikis are Web sites that can be edited by anyone who has access to them. The word “blog” is a contraction of “Web Log”- an online Web journal that can offer a resource rich multimedia environment. Podcasts are repositories of audio and video files that can be ‘pushed’ to subscribers, even without user intervention. These audio and video files can be downloaded to portable media players that can be taken anywhere, providing the potential for “anytime, anywhere” learning experiences.

A blog is a website where entries are made in a journal style and displayed in reversed chronological order. Whereas a wiki is a website that allows users to easily edit, add, remove and change the content of pages, sometimes without the need for registration. Facebook is another social networking website that was originally designed for college students but is now open to anyone over the age of thirteen years. . : **Illuminate**, the company offers live web conferencing and e-learning solutions for academic and corporate markets.

These were selected because they were proven to very effective tools that support asynchronous and synchronous online learning / teaching.

### **Introduction and Aims of this Paper**

Mills(2002) noted that the conversation within higher education is no longer about whether or not technologically mediated instruction has integrity, but in what combination of forms and what variety of media best responds to learner needs. The selection of the best technology to meet specific learning objectives is referred to as blended learning. (Kerres & De Witt, 2003)

Online supplements to traditional face to face course instruction have become common and one of the most current adaptations of these support technologies has been web based logs or journals called “blogs” (Martindale &Wiley, 2005)

Wikis, blogs, podcasts carry the potential of complementing , improving and adding new collaborative dimensions to many Web based medical/health education, and research services currently in existence. They offer many unique and powerful information sharing and collaboration features. They also afford users the added advantage of reducing the technical skill required to use these features by, by allowing users to focus on the information and collaborative tasks themselves with few obstacles. Such technology is known as ‘transparent technology’ in as much as the user is able to concentrate more on the learning of the task by ‘seeing through’ the technological environment they are immersed within.

This paper seeks to explore, with examples the current uses of Web 2.0 tools in the field of education in relation to open and blended learning.

## Literature Review

There has been much discourse around the notion of Web2.0 in recent years . The term was officially coined in 2004 by Dale Dougherty, a vice president of O' Reilly Media while planning for a web conference (Anderson 2007) Web 2.0 is a term that describes new collaborative internet applications. The primary difference between web1.0 and web 2.0 is that the latter fosters collaboration and greater participation in content(Mc Lean, Richards & Wardman, 2007) In addition Web 2.0 technologies utilize 'collective intelligence"providing network enabled interactive services giving users control over their own data.(Madden & Fox,2006)

Web 2.0 technologies include blogs ,wikis, podcasts ,vodcasts, Rss/atom feeds, social networking and social bookmarking. These technologies facilitate a more socially connected Web.

According to Sendall et al, mature online users over 40 years old are still using web 1.0 technologies such as email. However young adults show different internet behaviours. An internet study found that 56 percent of the young people in the US were using computers for "creative activities" Those activities included using web 2.0 technologies such as social networking sites, My Space and Facebook, they were blogging, using wikis, mixing and constructing multimedia. Today's student occur in an active format: they are quick to "change channels" when their active learning expectations are not being met(Saulnier,2007) they are proficient at multitasking and also with the use of technology: however many are not self assured with course texts, written instructions assignments

According to Chin(2008) , students are savvy Internet users, perhaps to the point of overuse or addiction; however, much of the dilemma lies with teachers who are less interested in learning web 2.0 techniques to incorporate across the curriculum. When educators fail to engage students with these types of activities, schools and other educational institutions run the risk of becoming irrelevant to the culture of discourse for young people and to the way in which young people interact and exchange ideas (Attwell) According to Wyld (2008), the blgosphere is a younger, more diverse environment than the Internet and society in general.

Much of the pedagogic use of blogging is grounded in Vygotskyi's theory (Ferdig 2004) Through social interactions mediated by language( but not restricted to language) edublogs offer students the opportunity to surface their ideas in a social plane. The ability to comment on these ideas enables individuals to participate in the social construction of knowledge and meaning makers. Blogging then supports the internalization of knowledge by allowing students to look back at their archived posts and reflect on what they have written and the comments provided by their peers or tutor.

The literature suggests that blogging can be used to positively enhance the teaching and learning of music. Kennedy (2003) reported on the integration of blogs into English classes in secondary schools.

Ward (2004) encouraged his English writing class students to blog and his post course survey confirmed that his students enjoyed the experience though they had no prior web design experience.

Ward's students (English Language) showed improvements and they were more careful in their writing as a larger audience ( inclusive of peers) could view and read their work.

## **Brief Overview of Wikis, Blogs, Podcasts and Facebook.**

### **Wikis**

A wiki (from the Hawaiian *wiki*, *to hurry, swift* ) is a collaborative Web site whose content can be edited by anyone who has access to it. Perhaps the best example of a wiki in action is 'Wikipedia'- The Free Encyclopedia' wikis can be used as a resource for obtaining information and knowledge, and also as a method of virtual collaboration, e.g. to share dialogue and information among participants in group projects, or to allow learners to engage in learning with each other, using wikis as a collaborative environment to construct their knowledge to be a part of a virtual community of practice.

### **Blogs**

A related Web information sharing technology is the 'blog'. A blog (WeBLOG) is a Web site that contains dated entries in reversed chronological order (most recent first) about a particular topic. Functioning as an online journal, blogs can be written by one person or a group of contributors. Entries contain commentary and links to other web sites, and images as well as a search facility may also be included. Since blogs engage people in knowledge sharing, reflection and debate, they often attract a large and dedicated readership. They can also engender the drawing together of small virtual groupings of individuals interested in co- constructing knowledge around a common topic within a community of practice.

### **Podcasts**

Podcasting is about creating content(audio and video- vodcasts) for an audience that wants to listen when they want, where they want and how they want. Users can listen to podcasts and watch vodcasts on their computer, or download to portable MP3/MP4 players and listen/watch on the move/anywhere, which is perfect for the busy student.

It is intended that podcasts will be used in the NOSTT programme to supplement the existing curricula. Podcasts can be used for

- Recordings of lectures for those students unable to attend the lecture in person
- Audio recordings of textbook content by chapter allowing students to 'read' or review texts while walking or driving to class

### **Facebook**

Studies are showing that more and more teachers are using facebook in the classroom. Two ways have been identified for the use of facebook in the classroom. One is to have everyone add you (the teacher) as a friend, then download the "File" module and the "questions" module. All assignments and other items get posted to the "Files" module and you can use the "questions" modules to send out questions to your students. The other method is to do the above, but also create a group for the class. Within the group you can post homework notices and other class notices, as well as an interface for students to discuss class issues

### **Advantages , Disadvantages**

The main advantages of wikis blogs and podcasts are their ease of use and the availability of many Open source/free or low cost software and hosting options to run them.

Examples of the latter Mediawiki(Open source- the same software package that runs Wikipedia and google Blogger(free)

Like podcasts, wikis and blogs also use RSS, which means users can easily set up/subscribe to 'feeds' to automatically receive content updates from their favourite services.

Podcasts also have the potential of offering superior support for auditory learners(30% of learners are auditory)

### **Disadvantages**

Wikis and blogs are prone to vandalism and as a result, to serious quality issues, because of their free form nature and the relative lack of control over their content. One of the most famous documented examples of web vandalism occurred in Wikipedia in the bibliographical article about John Seigenthaler, Sr.

In an open and collaborative Web environment, anyone can very easily post copyrighted material without the permission of copyright holders, post unsuitable and misleading content, edit existing content in a way that reduces its quality/accuracy, or even delete a good wiki entry. There is also the problem of protecting patient anonymity when data images are posted on the Web.

Most good wiki software however includes a restoration/rollback function which allows the administrator/editor to revert a page to its latest non vandalized version.. Copyrighted material posted can be edited out.

### **Methodology**

A survey was designed and distributed to analyze NOSTT staff and learners use of the popular Web 2 tools such as blogs, wikis, podcasts, facebook and elluminate vRoom. For the purposes of this proposal the main focus will be on the use wikis, blogs, elluminate vRoom and facebook. The population for this study consisted of NOSTT Mentors and Tutors.

Mentors and tutors were invited to leave notes on Facebook on chosen subject areas. Notes were also left concerning upcoming tests with relevant schedules and times.

Tutors were also encouraged to post general comments on class participation, difficult topics and study tips to name a few.

The Elluminate V Room was also used. The room offered real time collaboration with up to three participants.

Features include two way voice over IP- audio, interactive whiteboard, direct messaging, application sharing, file transfer, web touring, live video and break out rooms. The V room can also be used for small group meetings, one on one tutoring or mentoring, virtual office hours and remote help desk support.

Learners were also encouraged to have one on one video chats with learners who had difficulties in the subject matter using either the V room or Skype.

Learners booked time slots to use the V room where they were able to speak and listen to their tutors. Wikis and blog were also used as a means of collaboration.

## **Discussion**

The uses of such technologies to encourage learners' deeper engagement with learning materials, and the affordance of shared working spaces to improve collaboration between learners are desirable outcomes. It is generally held by many educators that students of all ages learn best when immersed within a culturally and socially rich environment in which scaffolding of learning can be achieved.

According to the literature, traditional learning designs promote a linear approach to the students' receipt of information and knowledge, however millenials( those persons born between 1982-2001) do not learn in a linear fashion.

This generation of learners live in a technology enabled world that promotes the ability for Millenials to multi task on a variety of items while remaining engaged in learning. Millenial students are immersed in interactions through collaborative and social technology tools like blogs, wikis, podcasts and various social networking tools that engage the generation's desire to learn in non linear modalities.

Millenials adept use of technology creates a population of masterful information collectors and researchers. The inclusion of collaborative computing technologies and the immersion in a technology enabled world promotes the multi tasking behaviour of millenials forcing a shift from traditional learning theories to those grounded in social constructivism allowing for more independent and collaborative discovery and knowledge creation.

## **Conclusion**

The literature review suggests the importance of web2.0 tools. Blogs, wikis, social networking and other collaborative tools are changing the way we communicate in society.

Web 2.0 applications are here to stay and be of great use in education. These new technologies are particularly vulnerable to criticism as they can be costly to deploy, time consuming to learn to use(e.g. for tutors to develop pedagogically sound 'use scenarios' and activities that make use of the new technologies, and may initially demonstrate little pertinence for teaching and learning. Emerging technologies such as those introduced above should be systematically evaluated to ascertain benefits and limitations in a number of learning contexts, and to determine and document their proper use for education.

Four distinct learning advantages can be observed when using Web 2.0 technologies (Ferdig and Trammel)

- The Use of Web 2.0 technologies can help the students become subject matter experts
- Increase student interest and ownership in learning
- Gives students legitimate chances to participate
- Provides opportunities for diverse perspectives both inside and out of the classroom

Studies have also shown that students who used weblogs found the greatest benefit of weblogging to be the opportunity for self expressions and perhaps self reflection. Online social networking tools may be of particular utility for individuals who otherwise have difficulties forming and maintaining both strong and weak ties.

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