Secondary school teachers' evaluations of an online community portal

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ABSTRACT

Secondary School Teachers' Evaluations of an Online Community

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If used effectively, computer supported learning environments (CSLE's) can be extremely useful communication and learning tools for both teachers and students. A template of an online community for the Lester B. Pearson School Boards computer supported learning environment, the Portal was created based on researched models. Secondary teachers at Riverdale High School in Pierrefonds, Quebec, were trained on the benefits and usages of the template so that they could integrate the design in their own curriculum. Teachers' attitudes and perceptions were examined prior to and after the training session. The template was tested out for a school year and suggestions for improvement of the design and training materials were documented. One of the teachers from the workshop was provided with follow-up training sessions where her perceptions, attitudes and feedback were examined. The researcher also actively participated in testing the template throughout the year in hopes of improving future template models and implementation strategies of the training itself.

ACKNOWLEDGEMENTS

I would like to thank my thesis supervisor, Dr. Vivek Venkatesh Ph. D, for all of his guidance, patience, and support.

DEDICATIONS

This research project was a labor of love that could not have been completed without the support from my husband, daughter and my family. Thank you for your understanding during all the rough patches and late nights. This accomplishment belongs to you as well.

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Introduction

Computer supported learning environments (CSLE) allow for the ability to store huge amounts of information. They are extremely useful communication tools and provide a means for interaction among people at a speed, efficiency and cost that is attractive. CSLE's are characterized by a social-constructivist approach of learning. The underlining principles of these environments can be summarized by the importance of the contribution of the group in the individual construction of knowledge by the subject. When students participate in collaborative inquiry-based activities it allows them to become active in their acquisition of knowledge, helps them build collaborative and social skills, enhances their conceptual understanding and helps develop their problem solving skills (Desjardins & vanOostveen, 2008).

There are still many challenges that need to be addressed when incorporating CSLE's which include a lack of support and understanding of this new learning culture and underdeveloped inquiry, as well as, facilitator training and support. There are also student challenges which include participation, socio-economic status, and writing skills issues. There is a gap in the research when it comes to examining how to evaluate student interactions, facilitator implementation of good practices, student motivation, anxiety levels of students, and the examination of how problem based learning is used in K-12 populations.

A review of two designs was examined (The Portal Community design Template and COLE-Collaborative Online Learning Environment) to address the gaps in the research and as a basis for further discussion on where the design of CSLE's need to be heading in order to effectively enhance the learning process of students using these technological tools.

Training materials were developed using Camtasia recording software. A workshop was put together for the teachers at Riverdale High School. Data from eight teachers was collected examining their perceptions and attitudes of using CSLE's, as well as, the effectiveness of the workshop and training materials prior to and after the session was completed. Once the training was complete, one of the participants continued with one-on-one training. Throughout the year, I tested the design out with four of my own grade eleven classes and kept a record of what

worked and needed to be improved with the design. One of the teachers' attitude and perceptions of the template design for the portal was analyzed as a gateway to gain feedback to improve its use as an educational tool for the students using it.

Topic Context

Benefits of Computer Supported Learning Environments and Problem Based Learning

Salovaara and Jarvela (2003) describe computer supported collaborative learning as "a recent attempt to enhance learning by utilizing technological tools. It is based on a socio-constructivist aspect of learning, which highlights both individual thinking and socially distributed knowledge construction" (p. 267). When using these environments students work within a social framework to learn and negotiate new meanings to create a shared understanding about different phenomenon. The students in these environments become the producers of knowledge and learn as they collaborate together (Desjardins & vanOostveen, 2008). Students engage in collaborative work, critical thinking, problem-solving, as well as social activity among their peers and the facilitator. Students bring forth their prior knowledge, communicate with others, generate new ideas, and expand on their previous knowledge. When students work collaboratively their metacognitive skills are enhanced by working in real life situations (Anderson & Elloumi, 2004).

Computer supported learning environments (CSLE) promote learners to be active in the acquisition of knowledge (Desjardins & vanOostveen, 2008). The constructivist learning theory focuses on individuals as they create meaning and gain knowledge through their own personal experiences, as well as, through interactions with others (Sargeant, Curran, Allen, Jarvis-Selinger, & Ho, 2006). The constructivist approach focuses on learning environments where students are provided with the flexibility of constructing knowledge themselves. Within the framework of socio-constructivism computer supported learning environments are often designed to take the learners from expressing their individual knowledge to collectively constructing and agreeing on a model or theory allowing the solution of a problem (Desjardins & vanOostveen, 2008). When using problem-based learning (PBL), which stems from the socio-constructivist philosophy, students work in small collaborative groups and learn what they need

to know in order to solve a problem. The teacher acts as a facilitator to guide student learning through the learning cycle (Hmelo-Silver, 2004).

In the learning process of PBL, students begin with a problem scenario. Then, they formulate and analyze the problem by identifying facts. Students are required to understand the problem better and generate hypotheses about possible solutions, identify knowledge deficiencies (issues that students research during self-directed learning that are relevant to the problem) and apply new knowledge to evaluate their hypothesis based on what they learned. At the completion of each problem, students reflect on abstract knowledge gained and evaluate knowledge gained in solving the problem (Hmelo-Silver 2004). In PBL students actively construct their own knowledge within the socio-constructivist framework of socially negotiating meaning. Computer supported learning environments encourage student – centered activities to solve authentic, ill-structured problem(s) (Desjardins & vanOostveen, 2008).

Benefits of Technological Design

There are benefits for users when incorporating the computer supported learning environment as a technological learning tool. CSLE's can enhance students' conceptual understanding of schema concepts by providing tools for organizing, representing and visualizing knowledge. They can also enhance students' long-term potential and conceptual understanding, rather than contribute to students' short term retention of the content or task accomplishment (Solavaara & Jarvela, 2003). There is also a level of flexibility for learners when using computer supported learning environments. Due to the asynchronous nature of the technology, students with time restraints can work within their own time frame (Cheung, Hew and Ng, 2008).

Problem Emerging from the Context

Still, there are many problems when attempting to use computer supported learning environments as a teaching tool. Such issues affect both facilitators and students. Problems stem from a lack of research and testing of the online environments which is needed to improve the interactions within the online learning environments.

Lack of Support and Understanding of the New Learning Culture and Underdeveloped Inquiry

Research has shown that there is a lack of understanding on how to participate when using this type of learning culture (Solvaara & Jarvela, 2003). The use of the technology and the socio-constructivist teaching approach can be unfamiliar to both students and facilitators. If the basic understanding and framework of problem based learning is not clear to both parties, an underdeveloped inquiry of collaborative learning culture could cause learners to have difficulties when constructing new knowledge (Solvaara & Jarvela, 2003). Furthermore, if the learning problem is not well structured this could also affect student interactions (Puntambekar, 2006).

Those Facilitators who are not familiar with the constructivist approach of teaching and learning may not be able to provide support to their students (Solvaara & Jarvela, 2003). According to Lim and Chai (2008) facilitators need a substantial amount of professional development to help them in understanding constructivist teaching and learning and providing them with the competencies to transform their pedagogical practices. Often times, teachers who have not participated in a constructivist-type classroom or even seen it being modeled tend to teach the way they have been taught (Lim & Chai, 2008). Support is also needed for facilitators to understand how to use the computer technology. Such support could be provided within professional development programs where teachers are engaged in constructivist-learning experiences in computer-mediated classrooms (Lim & Chai, 2008).

Student Challenges

Students also face their own challenges when attempting to use computer supported learning environments. Issues such as, participation, student support, socio-economic status, and writing skills are all important when trying to utilize CSLE's for their maximum potential.

Participation

Participation from students is an integral part of the success of computer supported learning environments. Cheung et al. (2008) describe that if students do not contribute to the online discussions (by procrastinating with their postings or not putting enough effort to their responses) there can be negative effects on the learning outcomes. Such effects can include the

questioning to resemble a question and answer session where participants simply answer their course mates' online queries, rather than extending the conversation on a particular topic or issue.

Student Support

In the study conducted by Puntambekar (2006) using CoDE, a CSLE based on a constructivist, problem- based approach, students perceptions of what was needed in a course were contrary to their expectations of their roles as students and the role of the instructor. Students expected the instructor to take the lead in every discussion and provide feedback on each of their responses. This could affect their willingness to raise new ideas and discuss diverse perspectives. Students were also not used to the role of the instructor as a facilitator and not a giver of knowledge (Puntambekar, 2006). Furthermore, students who are not familiar with the socio-constructivist philosophy of actively constructing knowledge can become easily frustrated. Therefore, it is important for the facilitator to provide clear expectations to the students and use scaffolding strategies to help guide the students when using these tools (Puntambekar, 2006).

Socio-Economic Status

When dealing with students in an educational setting it is important to make sure that they are provided with equal opportunities to learn. If they are at a disadvantage because of their socio-economic status then it would be unjust to administer a tool such as a CSLE which requires the use of technology (computers, internet access, software) that may not be available to all students. Parents of students with a higher socio-economic status and higher education are more likely to have the technological skill to support their children's home computing efforts (Kafai, Fishman, Bruckman, & Rockman, 2002).

Writing Skills

Students whose written communication skills are weak may feel limited by their writing ability when engaged in online interaction and learning. Students need to be encouraged to express appreciation for positive aspects of others' work before making suggestions (Lin, Lin & Laffey, 2008).

Review of Literature Related to Context of Topic

There are still many problems that need to be examined in the area of computer supported learning environments were research is still lacking. Such problems need to be addressed with further research and investigation to enhance the learning process of CSLE's.

Student Evaluation

Pozzi, Manca, Persico, and Sarti (2007) discuss how when tracking and analyzing learning processes while using CSLE's there are drawbacks in how interactions are assessed. They address the difficulties facilitators face when evaluating CSLE's because feelings, competences and meta-cognitive abilities might not necessarily be expressed is discussions and messages but they might still be felt by the participants.

Facilitator Implementation of Good Practices

Another area within CSLE's that lacks research, is dealing with how to expand and implement the good practices that researchers and teachers have found and developed. While there are advantages to having access to this type of online learning environment, if facilitators and students are not sure how to integrate the technology, then there is no point to its use as an educational tool (Lipponen, 2002).

Student Motivation

Cheung et al. (2008) point out that there has been little research conducted that addresses students' motivation related to their contribution in online discussion and what causes student contribution to end. There is also a need to investigate why students contribute or choose not to contribute in a variety of cultural contexts (Cheung et al., 2008). Hmelo-Silver (2004) also describes that there is little research that bears directly on the issue of enhancing intrinsic motivation in problem based learning. Instead, she describes that most of the research has examined student satisfaction or confidence.

Student Anxiety

Student anxiety about technology use is another issue that needs further research as well. Lin et al. (2008) address the need for further research on what impact technologies such as on-demand video, file-sharing, Weblogs, wikis, podcasting, and RSS feeds that are incorporated with text, have on the level of anxiety perceived by online learners. They also address the need for further research when discussing how the level of anxiety might impact and influence interaction with the audience and learning from the experience.

How Problem Based Learning is used in K-12 Populations

According to Hmelo-Silver (2004), the claims of PBL advocates are not all supported by an extensive research base, and much of the research has been restricted to higher education, predominantly in medical schools. There is little research with K-12 populations on how to organize classroom activities and plan to engage in meaningful participation of PBL for the duration of entire class periods.

Comparison of Designs:

Table 1: Comparison of Portal and COLE design: Addressing gaps in the research

	The Portal	COLE
Design	Online Workspace incorporating tools: ▪ Time management tools o Calendar ▪ Information tools o Course documents o Projects and assignments o Self-Evaluation tools o Video cases ▪ Mind tools o Online free shareware resources ▪ Communication tools o Discussion forums ▪ Files and folders o E-Portfolio o Public folder to share work	Online Workspace incorporating tools: ▪ Time management tools o Agenda and calendar ▪ Information & processing tools o Online free shareware resources ▪ Information access & management tools o Access online information and documents o Area to store information or documents using wiki ▪ Communication tools o E-mail o Peer-to-peer videoconferencing and video chat o Chat room

Target Audience	Secondary students from senior media course	Undergraduate course for pre-service teachers
How it can address evaluation	Students can be evaluated based on: ▪ PBL o Contribution to online discussion forums o Process and reflection of PBL learning scenarios within discussion forums ▪ E-Portfolio o Reflection of process on selected works from course	Students can be evaluated based on: ▪ PBL o Collectively construct and agree on a model or theory allowing the solution of a problem o Use of Wiki as group to negotiate a collective "vocabulary" about various definitions
How it can address facilitator implementation of good practices	Further research and testing will be necessary. Pedagogical training will be required at the school level with teaching professionals to address the implementation of good practices.	Not stated within study. Based on constructivist perspective where students are in control of their own learning activities.
How it can address student motivation	Further research and testing will be necessary.	Not stated within study. However, from initial testing, many students commented on the fact that they enjoyed being in control of their own learning activities.
How it can address student anxiety	Further research and testing will be necessary. Students would need modeling and scaffolding for proper usage (Salovaara & Jarvela, 2003).	Not stated within study.
Findings from initial testing	Has not been fully tested.	Initial reactions to testing found issues with two separate aspects of the design, technical and pedagogical. During testing there were technical issues with the server which was insufficient to handle the number of participants. There were also technical issues with the Wiki, however as the discussions progressed, opinions grew as to its potential. The pedagogical issues surrounding the constructivist approach to learning showed that the students enjoyed being in control of their own learning activity.

Note. Cole design analysis from "Collaborative Online Learning Environment: Towards a process driven approach and collective knowledge building," by F. Desjardins and R. vanOostveen, 2008.

Table 1 examines the design aspects of COLE vs. the Portal design for my secondary school media course which uses aspects of the design of COLE. It compares the designs to examine how improvements can be made based on the literature. There are still many gaps in the research that need to be further investigated.

There are still many issues that need to be addressed when examining computer supported learning environments. Research has shown that student motivation is important. However, there are still issues that need further investigation in this area (Cheung et al., 2008; Hmelo-Silver, 2004). Since this type of online learning environment has a social aspect to it, perhaps students may feel more receptive to joining in. Tung & Deng (2006) discuss how "computer programs providing appropriate, timely automatic guidance and anticipated responses allow learners to perceive a sense of social presence from the computer, which in turn enhances learners' involvement and motivation"(p. 261).

Gunawardena, Ortegano – Layne, Carabajal, Frechette, Lindemann and Jennings (2006), describe mentoring as "a mechanism for people supporting people as knowledge is created" (p.220). Perhaps students who are provided with mentors at their disposal will feel more inclined to participate because they will have support from a more experienced member of their learning community. Students may not easily adapt to inquiries or be used to collaboration as a learning strategy. Students can benefit from both cognitive and procedural support in their strategic actions. Modeling is one way to enhance the use of deeper level-strategies to encourage collaboration amongst students (Salovaara & Jarvela, 2003).

As a secondary school teacher my main concern lies within the fact that very little research has been done to test these environments in a K-12 setting. Certain aspects of the PBL model need to be tailored to the developmental level of the learners. Hmelo-Silver (2004) describes how PBL may prove particularly difficult for younger learners who tend to have difficulty applying metacognitive strategies. There are also different constraints when it comes

to classroom organization in the K-12 setting. Furthermore, the issue of socio-economic status is important to consider when incorporating this type of learning environment outside of the classroom. Educators need to provide fair and equitable learning opportunities for all their students which might prove to be difficult when using computer supported learning environments.

Based on the research provided, it is evident that Computer supported learning environments have vast potential to encourage learners to engage in reflection and dialogue, encourage mutual trust, respect and commitment, and to care for the common good of the entire group. CSLE's also provide opportunities for participants to interact, receive feedback, and learn and grow together (Gunawardena et al., 2006). Such qualities are at the core of what educators strive to achieve from their students. Research backing how to use it effectively and efficiently was justified considering how this technological tool is capable of aiding in the development of such benefits.

It will be interesting to do more research on how computer supported learning environments can be effectively integrated in the secondary school setting. There is definitely a need to for economical resources that encourage higher level thinking. Support and training materials on the pedagogical and technical aspects of this technology are also needed for teachers in the elementary and secondary school setting.

Research Problem

Computer supported learning environments have many benefits and challenges. However, with further research, the possibilities for these tools can be extremely effective. Those who use CSLE's can benefit from the social-constructivist philosophy of the contribution of the group in the individual construction of knowledge. Students are active in the acquisition of knowledge which leads to better retention and long term transfer of knowledge (Gunawardena et al., 2006). Students also engage in problem based learning activities that encourage flexible knowledge, effective problem-solving skills, self directed learning skills, effective collaboration skills, and intrinsic motivation (Hmelo-Silver, 2004). The COLE and Portal

design comparison reiterated the need for further research and testing for an effective design that encourages student contribution and is user-friendly.

This study examined how teachers can effectively use a computer supported learning environment within a secondary school setting. Extensive training on the myriad facets of the computer supported learning environment (the portal) was provided to teachers at Riverdale High School in Pierrefonds Quebec. Included, was an explanation of the benefits of using the CSLE and how to effectively integrate the technology in their classrooms. Teachers' perceptions and attitudes was studied in hopes of improving methods that facilitators can use to integrate the technology into their lessons to improve student participation without feeling anxious about the use of the technology. Feedback from the teachers was gathered from the study to improve the design and implementation methods (i.e. staff training methods) of the template from the portal to ultimately improve the learning process of the students.

A computer supported learning environment template using a portal was designed. Teachers were trained on how to use it in their classrooms and were evaluated in situ. The perceptions, attitudes and feedback of the teachers were examined in hopes of improving future template models.

Discussion of Technology from Technological Perspective

The portal was introduced to the school board as one of the initiates to collaborate the Educational Services Department (ESD) and Information Systems Department (IS). The Lester B. Pearson School Board in accordance with the Ministry of Education was mandated to provide services in the classroom and professional development for teachers pertaining to curriculum integration with the use of technology in the classroom.

The portal is a product of GRICS "Edu-Groupe." GRICS is a company that provides educational services using technology. The Portal was retained by the school board as a gateway solution to integrating pedagogical and administrative services to faculty and staff and students.

The portal is an asynchronous learning tool where students, teachers and faculty have access to a variety of resources. Students can check the homework for the week, communicate with other students on assignments, see and post examples of projects and receive timely support from teachers all in their own time outside from class time. Students can chat with their peers in a controlled setting that is completely monitored by the teacher and submit their work privately to the teacher or "show off" their work for others to see on the portal.

The portal can be accessed from any computer with internet connection. (e.g.: School, homes, public libraries, internet cafes, laptops) use portal at any home, teacher would give computer time during class. This accessibility is what makes the portal so unique. Unlike other content providers such as, First Class, the portal does not need to be uploaded onto a computer. It is a website therefore it is very easy to log onto.

Figure 2: Screen shot of sign-in page of Portal

Teachers can use the portal to check their email, organize their administrative duties including entering their daily attendance and grades and create class communities which ultimately act as virtual extensions of their face to face class activities. Teachers have complete control of their student's activities when using the portal because they can view when their students have logged on and if they are doing what was initially expected of them from the teacher.

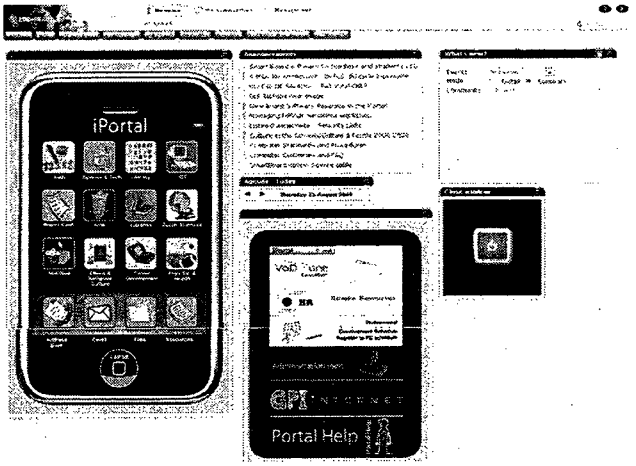


Figure 1: Screenshot of welcome page of Portal

The portal offers many services to administrators, teachers and students. Initially users must sign in access their personal portal. They can access this by going to http://portal.lbpsb.qc.ca. Students and faculty are given a username and password (which they are required to change once they log in)

Once logged in, users are directed to a welcome page where they have access to many services including email, address book, file manager, agenda, pedagogical and administrative resources, favorites, announcements, and to view "what's new." They can also access different communities.

The iPortal is where teachers can access the educational services departments' (ESD) online services. The ESD service is offered to teachers who may need help in their subject area. Pedagogical consultants are hired by the Lester B. Pearson's school board and are required to put their resources online for teachers to access. The iPortal is also a link to teacher's personal address books, email, files and resources.

Figure 3: Screenshot of iPortal on Portal

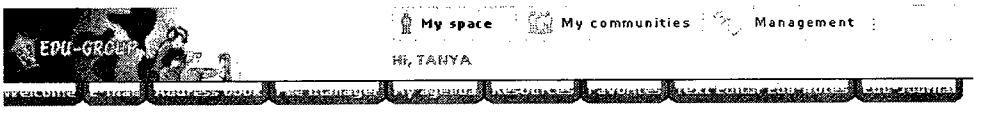


Figure 4: Screenshot of tabs on Portal

Users of the Portal have access to different services. In the users "My Space" area, they can access their email, keep track of important email addresses using the address book. Using the file manager, they call upload files to keep them organized. Users can organize their day and work using the agenda, they can also access online resources that are placed on the portal by individuals at the school board. Users can keep track of their favorite websites by keeping tabs of their in their "Favorites" tab. The text editor 'edu notes' is an application which acts as an area where users can write text and save it in their files.

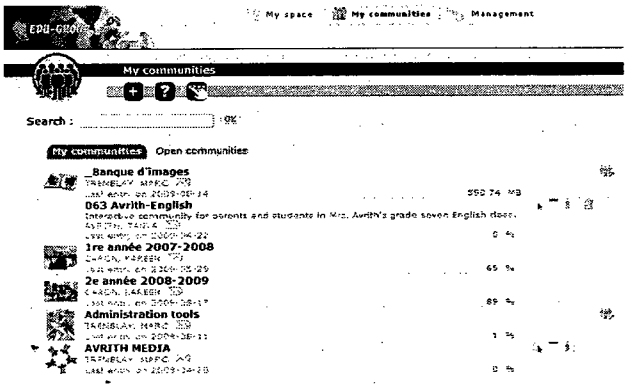


Figure 5: Screenshot of My Communities on the Portal

In the "My communities" area, users have access to different communities. Communities are areas where individuals can place and organize information and invite others

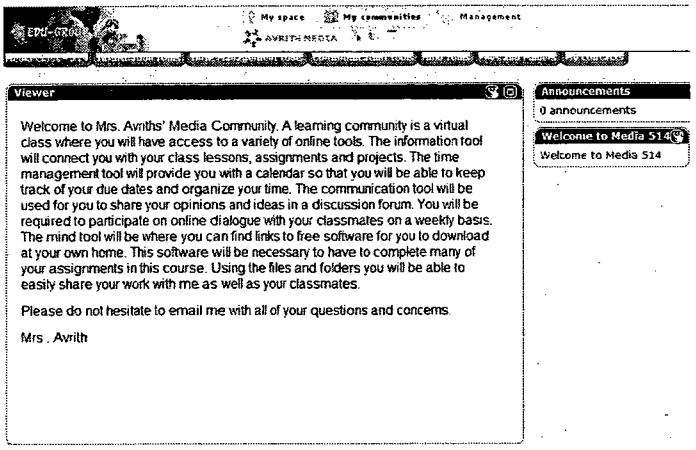


Figure 6: Screenshot of welcome page on community template

to join. Individuals can also ask permission to join certain communities. Different individuals can become members of a variety of communities that are of interest to them. Teachers can share resources with their colleagues and teachers can create communities that compliment their class work. To create a community, it is not necessarily easy for everyone to use. Those who are not technologically savvy may find it intimidating to put one together. It is for this reason that creating a ready to use template was seen as an important performance need that I saw could be addressed. The community template that was created incorporates "tools" that students can use to accompany their class lessons. When students log into their class community they will automatically view their daily announcements from the teacher. These announcements could be homework reminders or information about assignments. When the announcements are clicked on they are displayed in the viewer window on the left side of the page.

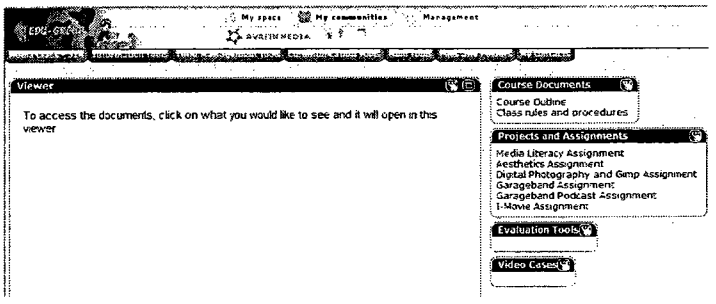


Figure 7: Screenshot of 'information tools' page on community template

Within the information tools page, users can access course documents including course outlines and class rules and procedures. Projects and assignments can be viewed so that students can access them if they have been forgotten or lost.

Students can also access the evaluation tools that teachers are planning on using to assess the students projects and assignments. Video cases (which are educational video clips) can be accessed by students. These clips can be viewed and further discussed in the discussion area found in the 'communication tools' area or as an in class activity.

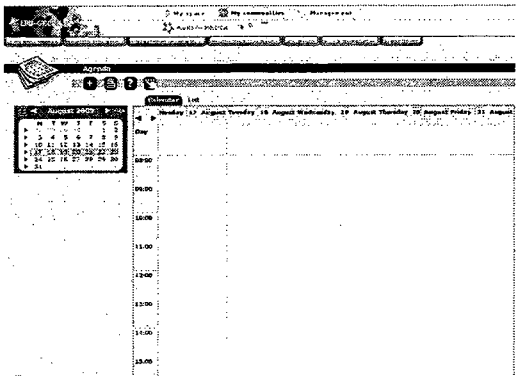


Figure 8: Screenshot of 'time management tools' on community template

The time management tool allows teachers to insert upcoming due dates so that they can be clearly viewed on the calendar. Students can organize their work by writing down important dates or homework assignments that they do not want to forget about. The due dates will show up in the announcements window on the welcome page so that when students log in they will display automatically.

When using the communication tools, teachers can divide their class into separate discussion groups. These groups can then be assigned various topics in a discussion forum that they are required to contribute to.

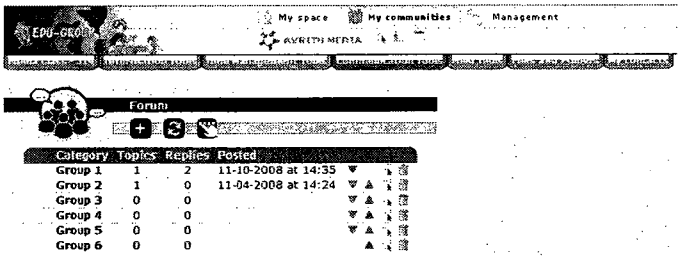


Figure 9: Screenshot of 'communication tools' on community template

The discussion forum is an opportunity for students to learn in a collaborative online learning environment. The teacher can assign a topic to the different groups and require students to participant to the discussion. Teachers are able to monitor student contributions because they have access to each student's online activities. They can view when and how often each student has logged into the community.

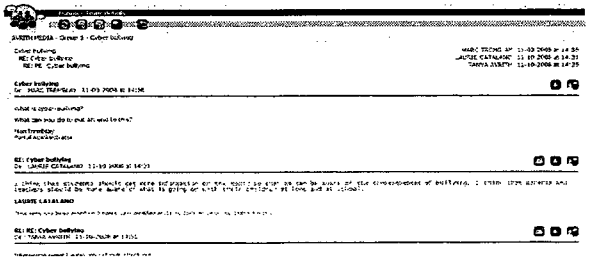


Figure 10: Screenshot of forum where example of discussion occurs on community template

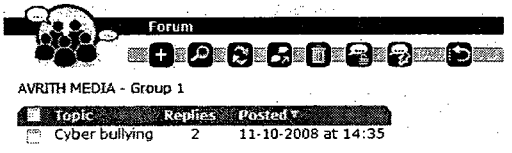


Figure 11: Screenshot of forum where discussion topics are held on community template

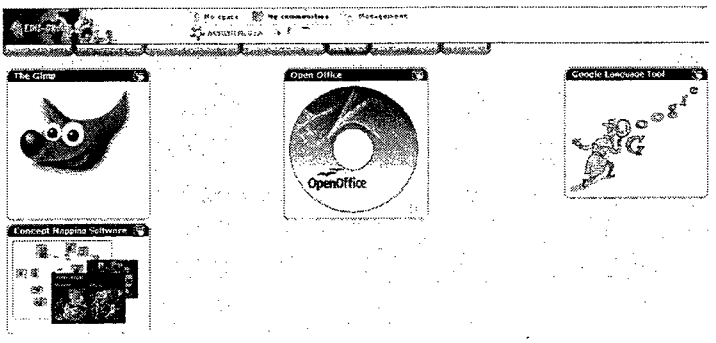


Figure 12: Screenshot of 'mind tools' on community template

Mind tools are links to free online shareware or resources that students can download at their own home to help them with their work. For example, if a student does not have access to Microsoft Office, they can download a free version of open office using the link on the portal.

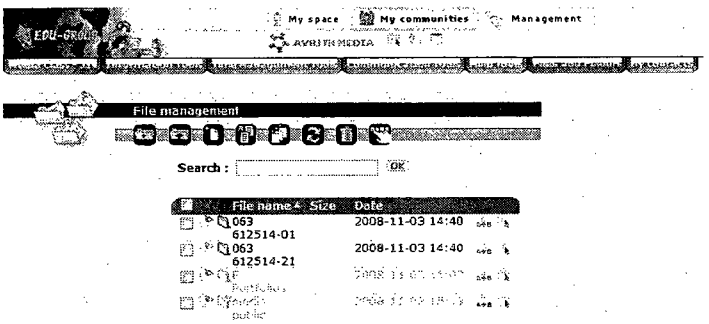


Figure 13: Screenshot of 'files and folders' on community template

The files and folders can have different functions. It will be used for users to share their work in a public folder with their fellow classmates for certain assignments. It will also be used for students to post their work in a private e-portfolio to share only with their teacher. Students will be able to reflect on the progress of their work using the e-portfolio and reflect on the process as opposed to concentrating solely on the end product.

Users can keep track of important email addresses from people who are on the portal to stay organized using the address book. They can also search through the directory to find the email addresses of users on the portal.

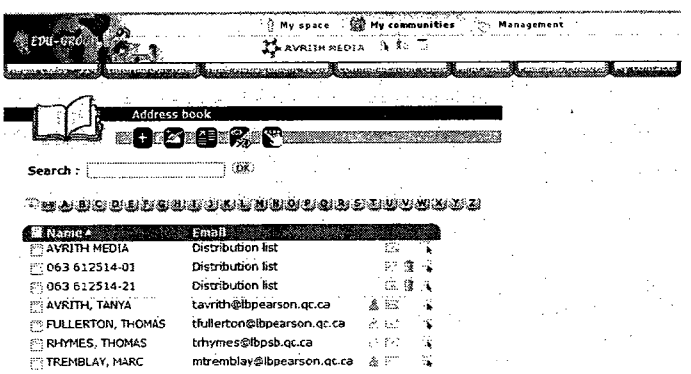


Figure 14: Screenshot of 'address book' on community portal

Method

Design

A qualitative approach primarily using an action research design was used for this study. Creswell (2005) describes the action research as: "...systemic procedures used by teachers to gather quantitative and qualitative data to address improvements in their educational setting, their teaching, and the learning of their students." (p. 53). Using this approach allowed me to gain subjective experiences from individuals to focus on their personal attitudes and perceptions of using the school portal itself as well as how they perceive my design and at the same time, allows me to actively participate in the research process. According to Creswell (2005), when using action research, one may seek to address and solve local, practical problems. In this case, I am designing a template for the school portal and training materials for teachers so that they can use the portal in their own classes to evaluate the design so that it can be improved.

Needs addressed by this project

Student needs addressed:

A Computer Supported Learning Environment (CSLE) template was designed using the school boards' online portal. This template was designed so that it could be used for any subject area and address almost every cross curricular competency that students are expected to master according the Quebec Education Program (QEP) by the time they complete secondary school such as; to use information, to solve problems, to exercise critical judgment, to adopt effective work methods, to use information and communications technologies (ICT), to cooperate with others, and to communicate appropriately. The CSLE can also be used to address many of the different broad areas of learning, especially media literacy.

The learning environment was created to act as a virtual class where students would not only be able to access lesson plans and homework assignments, but they would also be able to use it as a forum to further discuss complex problems that have been addressed in the classroom. Students were able to collaborate with their peers and teachers and share their

work using files and folders which allowed students to easily upload their work onto the portal. Students were also required to reflect on the process of their learning and assess their progress as opposed to the teacher only evaluating the end product. With the use of this technological tool, students were able to become much more active and take control of their own learning process. Students were also able to access free shareware resources online via the CSLE. Students were able to keep track of their upcoming assignments and deadlines with access to time management resources that allowed them to be part of the design. Furthermore, interested parents' of students were able to become much more involved in their students' learning with access to the learning materials that were provided to the students through this technological tool.

Teacher needs being addressed:

This project also addressed the need for further training of teachers on both the technological and pedagogical uses of this teaching tool. Teachers who were interested in using the technology but were overwhelmed required support and training. They used this initiative to provide them with all of the resources that were needed to get started.

The training materials included fourteen online video tutorials. They were created using Camtasia software which contained easy to follow step-by-step instructions with audio commentary taken directly from the actual design. The video tutorials were made available to them in their own community on the portal. A workshop was created and provided hands-on training to teachers in small groups where they had access to the support and resources that they needed.

Setting and Participants

The study took place at Riverdale High School in Pierrefonds, Quebec. The principal granted me permission to conduct my research with the teachers. The training session involving eight participants occurred on November 19, 2009 at the schools' computer lab. The computer lab has 20 Dell computers, with Internet access.

The initial skill set of technology varied amongst the teachers. The participants involved were all colleagues of mine, many of whom I have known for the past five years. They participated on a volunteer basis during their own free time. During the post training interviews, a participant involved was visited in her own classroom. The participant is a French teacher who considered herself an intermediate technology user who was interested in integrating this new technology into her curriculum. See Appendix A for consent form.

Materials

The portal itself is hosted on the school boards server. Training materials were created using Camtasia recording software and a Snowball microphone recorder. Teachers were provided with CD ROMS which contained all of the videos and resources that I showed during the training session. The Dell computers used were all connected to the internet through the school boards server.

Methodology

Prior to training session

The design of the template needed to be researched and developed before the thought of any training could occur. The first two months of the school year were used to get the design of the template set up and organized on the Portal. Two meetings with the portal administrator, Marc Tremblay, at the school board were held during the time to get the community up and running on the Portal. During the creation stage of the design it was tested in my personal classes, looking at functionality, practicality and how user-friendly it was. I also looked to see if it held up technically as well as if there were any aspects to the design that could be incorporated that were missing. Once I felt that I had a good grasp on the design I began to develop the training materials for the staff body.

The training materials were developed over a four day period. The training materials were created using Camtasia, a software that records audio and screen movement on the computer. With this software, I recorded fourteen videos that were detailed step-by-step instructions for those interested in getting started on the template that was created.

During the staff meeting on November 3rd, 2009, I explained to the teachers that I was providing a training session on how to integrate the school portal community template that I developed into their class lessons. I explained some of the benefits of coming to my session and briefly went over what would be covered. I then handed out a sign-up sheet to the staff, (roughly sixty staff members in total).

Training Session

The training session took place on November 19, 2009. There were two sessions. Teachers signed up for either the beginner or intermediate/advanced sessions. The beginner session was slower and provided more time for the participants. The first one began at 9:00 AM with the self proclaimed beginner technology users. The second session began at 10:30 with the intermediate/advanced technology users. Before the workshop began, I handed out a questionnaire (See Appendix B) and the consent form (See Appendix A). Beforehand, I explained to the participants what the study entailed. However, I did not explain what my research questions were. This omission would to try to eliminate any bias in the responses from the questionnaires.

The questionnaire asked a variety of open and closed-ended questions relating to their perceptions and attitudes towards the integration of this technology in their teaching and their personal skill sets. The questionnaire also asked for their opinions of how they viewed the portal, and what they would consider to be effective training methodology in order to motivate them to integrate this technology into their curriculum.

The willing participants were informed that their information would remain confidential and only I would know their true identity. I left the staff with my email address in order to give them every opportunity to have questions answered should any arise after the research was conducted. I made it clear to my participants that should anyone wish to withdraw from the study, their questionnaire would be removed from the data collection.

The session was divided into four parts:

1. What are the benefits of using an online community? (10-20 Minutes)
2. How can this online community be integrated in your classroom to accompany your curriculum? (10-20 Minutes)
3. Step-by-step guidance on how to technically use the online community as a learning tool (20-30 Minutes)
4. Question and answer period (10-20 Minutes)

The session explained:

1. What are the benefits of using an online community? (10-20 Minutes)

Within this section, the benefits to both the teachers and students were explained so that they understood that this community is a useful resource that they should be taking advantage of. They were shown what research has said about using computer supported learning environments. They were shown why the design of this particular template was beneficial for them to use as opposed to them going on themselves and starting from scratch.

2. How can this online community be integrated in your classroom to accompany your curriculum? (10-20 Minutes)

Users were provided with real examples from my own class usage of the portal template on how they can use the online community to help teach in their specific curriculums. The teachers were given the opportunity to use the community like a student would in their class to show them what the capabilities of the portal are. They were able to go on themselves and experience using the community at their own pace to get familiar with the design. Step-by-step guidance on how to technically use the online community as a learning tool (20-30 Minutes)

Once the teachers had an understanding of how they could use the community as a teaching tool it was important for them to understand the technical aspects of the portal. They were then given an activity (See Appendix D) where they had tasks to complete using the fourteen training videos that I created for them using Camtasia software. They were shown how to upload lessons and assignments, how to manage the discussion boards, to add links for online resources, to add events to the calendar and announcements, to put in personal messages to

students, how to check to see if students are using the portal, and how to manage the files and folders.

3. Question and answer period (10-20 Minutes)

At the end of the workshop teachers were provided with the opportunity to play around with the technology and ask any questions that they had. I also handed out my second questionnaire (See Appendix C) using both open and closed-ended questions to collect data on their perceptions and attitudes towards the technology and training session now that they have had training using it. The questionnaire looked at the teachers' opinions on how they viewed the portal and what they thought of the design of the template. The teachers were also asked if they considered this training session effective, as a motivating factor for them to integrate this technology into their curriculum.

During the question and answer period the teachers were asked if they would like further assistance and training on how to integrate this technology in their own classes. Those who were interested were asked to sign up for more individualized sessions. Those individuals who signed up were followed up with further analysis on their opinions and perceptions about the design. The progress of usage with their classrooms was documented and reported using an action research model of analysis.

Follow-up training analysis

During the following months, one teacher from the training session was provided with individualized training including hands-on sessions in their own classrooms during class time. I met with this teacher several times helping her set up her classes using my template. During the one-on-one sessions, the participating teacher was interviewed periodically to see if progress was being made with the usage of the online community in her classroom. I then asked her to give her feedback on the design of the template.

Findings and Related Discussion

The research conducted for this project included teacher evaluations of the training materials and portal template, post interviews following up with a teacher participant from the workshop on her personal experience with the template and an analysis of my personal experience after testing the template for eight months with four secondary five classes. The three separate sets of information were recorded and analyzed.

Teacher feedback from training workshop

The feedback from the workshop held on November 19, 2009 was documented from the pre and post questionnaires and my own personal observations from the workshop. The data was analysed looking for interesting information and key ideas to help improve the design of the template and the training materials that were created to teach how to use the template.

The participating teachers were asked a series of questions prior to and after the workshop was complete (See Appendix B and C). The intention of the pre-questionnaire was to examine the teachers' attitudes and perceptions of technology integration and CSLE's into their curriculum and to get a better understanding of their experience and comfort level of using computer technology in their classrooms.

Findings from pre-questionnaire

The teachers who participated ranged from a series of subject specialties, such as Science, Mathematics, French, English, Social Studies and Drama. The years of experience ranged from teachers in their first year to one teacher who was in his forty-first year of teaching. The majority of teachers (6/8) indicated that their preferred teaching methodology was an even balance between teacher-directed and learner-centered. There was one teacher who indicated that he was more teacher-directed then learner-centered and another who was more student-centered then teacher-directed. Having teachers who were motivated to learn new teaching methods using technology that would allow for more learner-centered opportunities made the training a lot easier because they had already bought into the socio-constructive perspective of teaching and student-learning.

When asked how often the teachers integrate computer technologies into their teaching activities, the majority of teachers (5/8) indicated that they occasionally integrated computer technology. The teachers indicated a variety of technology that they use, the most common was the computer and projector. One of the teachers indicated that the technology that he was using in his classroom consisted of the use of the blackboard, telephone and fax machine. There were no teachers who discussed using computer supported learning environments in their teaching. It was interesting to see that some teachers think that by using a PowerPoint presentation they are fully integrating technology into their classroom teaching, however, there is really not a huge difference between a blackboard and a PowerPoint when it comes to technology integration considering there is no collaboration amongst the learners. Having a workshop on a computer supported learning environment that discussed the idea of collaborative learning was important considering the participants had no prior experience teaching with a tool that would encourage the students to construct knowledge in a social environment.

When asked what would make teachers more willing to integrate more technology in their teaching, a reoccurring theme amongst the teachers was that they would be more willing to use technology in their teaching if they had more access to equipment and computer lab time for their classes. One teacher even mentioned that she would be much more willing to integrate technology in her teaching if she was taught new and innovative ways to use it. The Portal is an effective tool to address such needs considering that students can access their course material from home eliminating the issue of having a lack of equipment in the school.

The proficiency levels in relation to computer technologies varied amongst the teachers. Five of the teachers (5/8) described their level of average, two of the teachers (2/8) described their levels as beginner and one teacher (1/8) described his proficiency as level as advanced. Having two separate sessions set up as beginner and intermediate/advanced addressed this issue.

When asked if they had ever used an online community before, one of the eight (1/8) teachers indicated that they had used one before. The community that the teacher was referring to was one that she had created using the portal. The teacher using the community on the portal had been using a design that she put together to share information with students to

help them with their homework. This particular teacher was using a template that she put together that was not very organized. Therefore, she was still interested in seeing how mine was put together. Teachers were asked to explain what would make them more willing to use the communities on the portal. The common response from teachers was if they were better informed on how to integrate it into their teaching.

Findings from post-training questionnaire

Once the teachers completed the training workshop they were provided with a questionnaire asking them a variety of questions relating to the training materials and the design of the template. The teachers were first asked if the training workshop clarified how to get started on creating and using a community in their own classes. All eight (8/8) participants answered "yes" to this question. Teachers mainly discussed that the step-by-step instructions with the hands-on assistance was really helpful. One teacher mentioned that it was useful for her because she would be able to continue working on her community at home at her own pace once the workshop was over since she now had the training materials at her disposal, which was goal of creating the training materials.

Teachers were then asked if the training session changed their views on using communities in their own classes. Seven out of the eight (7/8) participants indicated that the training changed their views on using communities. The teachers were in unison on the multiple uses and benefits that the communities could offer. Teachers were excited that they could now post information such as due dates on the calendar and assignments in the information tools. One teacher wrote, "Such a useful tool for sharing information with students now anything that is missing can be accessed from home." Another teacher described, "I am now a lot less nervous about using it." I hoped that more teachers would recognize the benefit of using the community as a collaborative learning tool but none of the teachers indicated that as what they were really interested in using it for. The teachers seemed to still see it as more of content management system as opposed to a constructivist learning tool. This element of the design will need to be addressed in a future training session.

The resources provided to the teachers (step-by-step video tutorials on getting started on the template created) were described as a great reinforcement and considered to be very clear. However, when asked how the resources could be improved teachers pointed out that

there was a slight technical glitch at the end of some of the videos where they cut off a second before they ended. One teacher mentioned that the resources could be improved by having the audio portion of instructions accessible while attempting an activity after watching the video clips. The suggestion made by this teacher was interesting. It would definitely be a good idea to have audio step-by-step instructions for teachers who really need a lot of guidance. However, the logistics of getting the audio running while teachers are on their community working is an aspect that would need further examination. Perhaps small podcast segments could be downloaded and labelled in the same order as the videos. This is an improvement that will have to be examined for future workshops.

Overall, the feedback about the workshop was positive. When asked what they found useful from the workshop, teachers mentioned that the videos were extremely useful when trying to set things up on their own using the template. The hands-on assistance that was provided was also mentioned as a benefit from the workshop. When asked what could be improved many of the teachers mentioned that they would still need more assistance once the workshop was finished. One teacher mentioned that it would have been useful to have a half day workshop instead of the hour and a half that was provided.

When asked if teachers would feel comfortable creating a community on their own five out of the eight (5/8) participants felt they would be able to do it on their own. The three participants who indicated no explained that they still needed more assistance and practice to feel more comfortable. However, all eight participants said that they would eventually create a community using the 'Avrith Template' for their own class. In terms of providing feedback concerning the actual design of the template, all eight teachers indicated that it was still too early for them to comment. They all indicated that they would need more time to explore the template before providing constructive criticism on the design.

Post - training interviews

When the training was complete all eight teachers indicated that they would be interested in more one-on-one hands on assistance. When approached in a follow up email providing the teachers with a copy of my schedule to see when they would like further help, only one teacher got back to me. I met with *Tori, a French and Social Studies teacher on several

occasions. Tori described herself as an intermediate technology user. She had eight years teaching experience but it was her first year teaching at Riverdale High School.

During our first meeting together we began by simply going over the general functions of the portal such as the email, the edu-notes, and the resources on the portal. I then began to go over some of the same material from the workshop. This time we went over some of the main functions of using the communities such as how to upload files and save them so that they show up in the i-frame as how to save word files as PDF files.

Since it is not always easy for those unfamiliar with using the portal, she needed to take notes while I showed her how to use the different functions. There is a lot of information and functions that people need to remember to get started. Having a readymade template for her to use with the videos made it a lot easier for her to get started. We began to enter some of her files but the time ran out before finishing, so we decided that we would meet again after the holiday break.

Getting together with Tori was challenging. Being a new teacher to the school, Tori was busy taking care of her students and her planning. When we had another chance to meet up and discuss getting the community up and running she confided in me that she simply did not have the available time that she felt would be necessary to get her work up and running on the template. She was unable to provide me with any feedback concerning the design of my template because she was unable to actually test it out with her classes. We plan on meeting at the end of the school year (sometime in June) to continue the training.

* Name has been changed to protect anonymity

Personal experience with portal template

As a grade eleven teacher I have the opportunity to teach courses where computer supported learning environments compliment the curriculum. This year I taught three different grade eleven courses, Integrative Project (two sections), Media Studies and Contemporary World. The template that I created was used with these three courses over the period of the year, in each class the same template was used however some tools were used more in some classes, compared to others.

Integrative Project

Integrative project was a new course this year introduced by the Ministry of Education. The class is designed around the principles of project based learning where students are supposed to come up with a project around a topic of their choice and further investigate on their own with guidance from the teacher. Students are required to reflect on their learning process and create links to previous knowledge. The students are not provided with much class time (one seventy-five minute period a week) and are still required to work on their own.

This class is a challenge to facilitate since it is not a typical type of course. It is supposed to be taught using a completely student centered approach where students discover their own interests and pursue them. With the time constraints and the nature of the course being student centered, the community on the portal was a great way to have the students organize their ideas and reflect on their process. Students used the communication tools area on the portal community to 'blog' on their process every week. Students were required to write about their goals at the beginning of the week. Once they completed their short term goals they were expected to reflect on their learning process. The term "blog" was used with the students as they seemed familiar with the process of blogging. When students completed a blog I would provide them with my personal feedback and guidance to help them move along with their work.

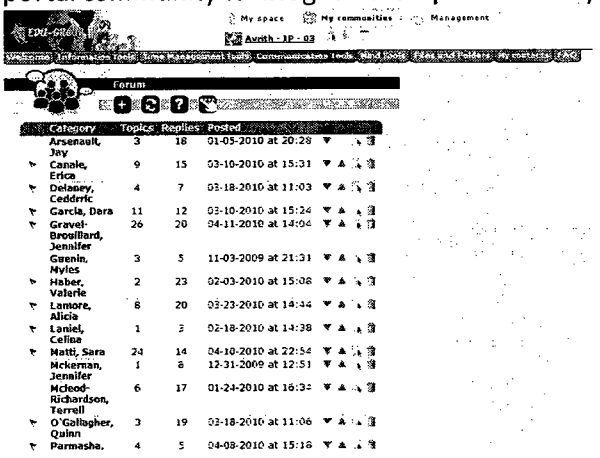


Figure 15: Screenshot of students' blog area on Portal

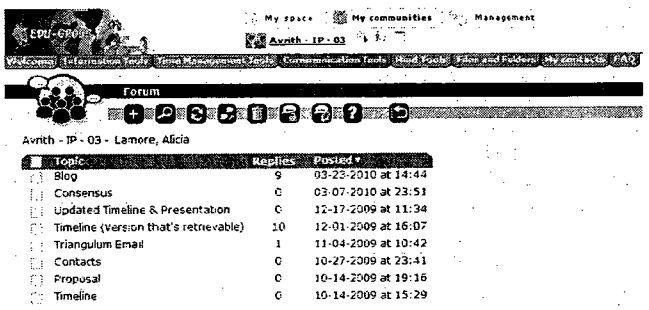


Figure 16: Screenshot of Topic area on Portal

Students were able to see each other's posts and were also encouraged to provide helpful feedback to each other. If students had something that they did on another program (Microsoft Office, a PDF, a picture) they could attach the file like saving an attachment on an email and it would be accessible for everyone

to view on the portal. For this class these functions worked well and were necessary because of the nature of the course (only seeing the students once a week). The biggest challenge that I faced with my students using this tool was having them be self-motivated to blog on a regular basis. I was able to create motivation by deducting grades each term of they did not participate.

Students had their names listed as a category, I was able to monitor their writing by seeing how many topics they had, how many times they wrote and when they last wrote. The red flag indicated to me that they had a new post that I had not yet seen.

Students were required to create specific topics so that they could organize their information for their project. As the facilitator, I was able to comment on their posts and provide feedback quickly, rather than waiting to see them in the class once a week.

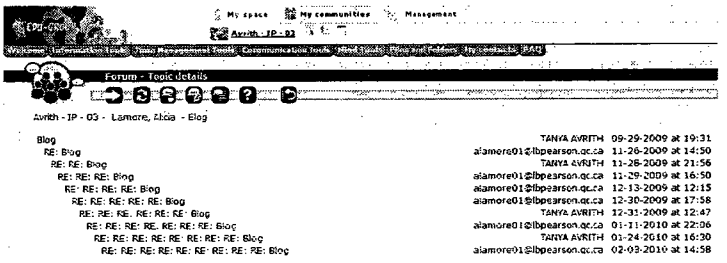
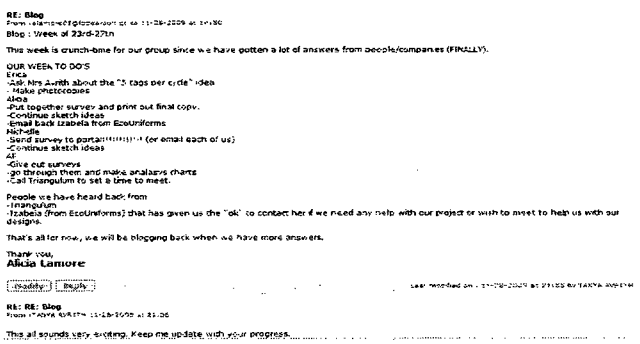


Figure 17: Screenshot of topics area data

Once a topic area was open the teacher and the student could see all the blogs written, when they were last responded to and what was written.

Students were required to blog on a regular basis. They needed to include their weekly goals and any progress that they have made. They were expected to reflect on their learning process, discussing what they accomplished and what they could improve. Once students wrote, I would comment and provide feedback as needed.


RE: Blog

Blog : Week of 23rd-27th

This week is crunch-time for our group since we have gotten a lot of answers from people/companies (FINALLY).

OUR WEEK TO DO'S
Erica
-Ask Mrs Avrith about the "5 tags per cycle" idea
- Make photocopies
Alicia
-Put together survey and print out final copy.
-Continue sketch ideas
-Email back Izabela from EcoUniforms
Michelle
-Send survey to portal (or email each of us)
-Continue sketch ideas
All
-Give out surveys
-go through them and make analasys charts
-Call Triangulum to set a time to meet.

People we have heard back from
- triangulum
- Izabela (from EcoUniforms) that has given us the "ok" to contact her if we need any help with our project or wish to meet to help us with our designs.

That's all for now, we will be blogging back when we have more answers.

Thank you,
Alicia Lamore

Reply | Reply

RE: RE: Blog

This all sounds very exciting. Keep me update with your progress.

Figure 18: Example of student blog on Portal

Media Studies

Media Studies is an option course with no administered curriculum. The curriculum is set by the teacher. In this case, I teach it in two terms. The first term concentrates on media literacy. The second term focuses entirely on media production. In this case, the community was used as a content management system where students were able to access their assignments online. The portal really comes in handy during the second terms when the class is entirely student centered. Students know that they can sit down on the computer and access their assignments. They know that they will be able find instructions for the day's lesson on their own.

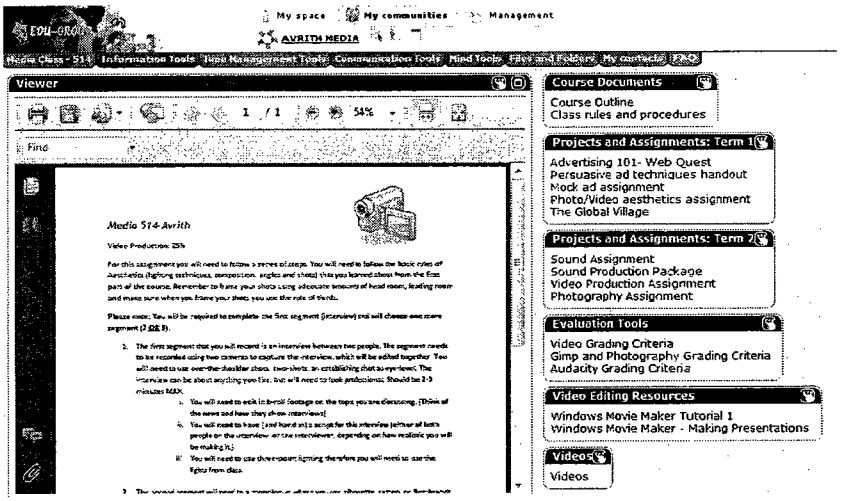


Figure 19: Screenshot of information tools on Media Studies community

Students have access to their course documents, projects and assignments for both the terms, evaluation tools (checklists and rubrics), resources (in this case video editing resources) and links to videos that they may need to access for reference.

This year I did not have the students use the communication tools to blog since I did not do any assignments this year where I felt they needed to. I might have them reflect on their process next year as part of the class, or perhaps have them use the communication tools as a discussion area to document their group work.

Contemporary World

Contemporary World is a grade eleven Social Studies course which examines different aspects of social studies (political science, economics, and sociology) and covers themes such as environment, population, power, wealth and tensions and conflicts. We examine current events and students are required to acquire a knowledge base as well as to be able to take a position

on various issues relating to the themes. Students taking this course learn how to improve their researching skills as well as learn how to become better at critically evaluating and analyzing information that they are presented with. I really try to get the students to become critical of the information that they come into contact with and encourage them to find multiple sources when they are researching for information and facts.

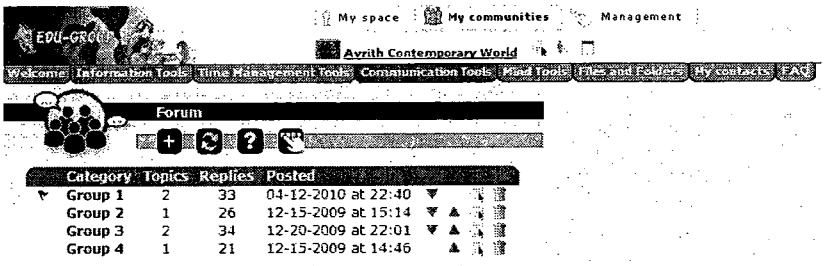


Figure 20: Screenshot of group organization in Contemporary World community

This year, one of the assignments required students to work in groups for a debate. Before they were able to present their debates, they were expected to work together to find valid and reliable sources to reference during their debate. They each needed to find multiple sources of information from the internet. However, they were not allowed to use Wikipedia as a source. I wanted them to use Google Scholar and Google News to help find information for their arguments.

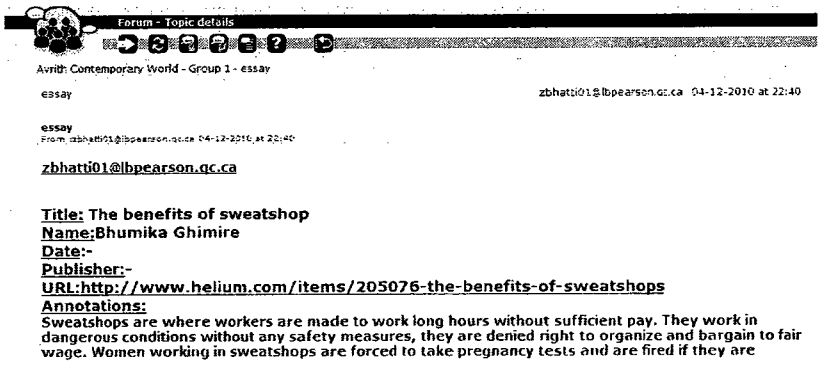


Figure 21: Example of student work - annotated bibliography

Every group was provided a private area in the communication tools were only the group members assigned to the particular group were able to see the content written by those group members on the Portal.

Each student in each group was then required to contribute by annotating their reference, deconstructing the most important information from the text and putting the information together using their own words. The type of learning really uses higher level thinking skills such as analysing, evaluating and synthesizing. Students were forced to contribute to the group's

efforts because I was able to see who had participated in providing information, how often and what was written. Students were also required to read and comment on each other's work. They were encouraged to add to each other's research to help build arguments collectively. The students were engaged in problem based learning, which stems from the socio-constructivist philosophy. Students worked in small collaborative groups and learn what they needed to know in order to solve a problem. In this case, my role was more of a facilitator where I guided student learning through the learning cycle (Hmelo-Silver, 2004).

Further Discussion

Limitations of the Project

Technological Issues with Portal System

The portal, a product of Société GRICS, an information technology firm that develops programs intended to satisfy the computer needs of its customers, had its own technological issues which were out of my control. When creating the template I felt restrained with what I could do. The template needed to be created within a set perimeter which I found to be restrictive in terms of the capabilities of what was already available via the portal system. For example, there was not much flexibility with the actual look of the design, as well as how user friendly the system was and the fact the system could be slow or not work at times.

When I first began creating communities on my own, I had a very difficult time learning how to organize the community in terms of using the technology. The system is not intuitive. Even as a self-proclaimed avid technology user, I had an extremely difficult time figuring out how to put the community together. I needed to meet with the portal administrator on several occasions before I was able to figure out how things worked. Every time I met with the portal administrator, it was time consuming and learning how to create the template did not come naturally to me because of the nature of the system. Without a template the user who is creating a community from scratch must go through a variety of steps that are not user friendly. For example, to create a template, a user needs to know what each function does. There is a detailed step-by-step process with no guidance. Therefore, if one misses a step they cannot continue. The process is complicated and time consuming which can dissuade a person from using the system.

When the teachers came to my workshop on creating a community using my template, they found it complicated, even though I was providing step-by-step videos and hands-on assistance. During the training session, I had many complaints because the users found the steps time consuming. For example, when teachers want to view their files in the viewer they must upload the files in the Files and Folders section then copy and paste the link into a made link in another section on the community. This entire process seems tedious and those teachers who do not understand how the creation of web applications work (in this case using hyperlinks to connect pages) could not understand why they simply could not upload the file directly to where they would like it to be seen.

The Portal system is run on the school board server which at times can have many glitches and tends to be slow. There are days where the system goes down and cannot be accessed at all. It is extremely common that when the system is used in the afternoon, it is painfully slow. This poses a challenge for teachers when their class materials are posted on the portal and they are trying to run a class activity on the system. When this happens it is challenging to get teachers to commit to using it because they feel like it is unreliable. It has happened to me on several occasions where I could not run my class activities as planned because the system was down or too slow. I always need to make sure that I have a backup plan when using the portal as part of my lesson.

Teacher involvement

One of the biggest challenges I faced while completing this research project was getting teachers to commit their time for further training and testing after the workshop was completed. Even though all eight teachers from the workshop indicated they would be interested in further training, I was only able to get one teacher to commit their time to more sessions. After asking teachers why they changed their minds, the common response from the teachers was that they found this a time consuming process that they did not feel they had adequate time to complete. Teachers also still felt uncomfortable to put their communities together without hands-on assistance. It is clear that facilitators need a substantial amount of professional development to help them in understanding constructivist teaching and learning

and providing them with the competencies to transform their pedagogical practices (Lim & Chai, 2008). The teachers indicated to me that if I had another workshop provided during a professional day they would be more than willing to come for extra help but they found it difficult to find the time in their day to day activities to put their community together. The teachers explained that they did see the value in this tool but felt like it was a daunting task to initially set it up. Teachers also indicated that they would like to have further training on the application of this tool to integrate it in their curriculum, and ideas for its use.

On personal level, I was committed to using the template throughout the year. However, I often found it difficult to find the time to keep my lessons and assignments up to date. I think that it would probably take me a full day to transfer the files into PDF's and upload and organize my community. I can understand how a novice could find it challenging to get their community started considering I personally have been having difficulties getting organized.

Future recommendations

Based on the feedback from the workshop provided in November and my personal use of the template throughout the year I have come up with suggestions of how the template and training materials can be improved for future use.

Improvements to design of template

In November when my workshop took place I held two separate sessions, one for beginner users, and the other for more intermediate users. The difference between the two sessions was that the beginner session was longer then the

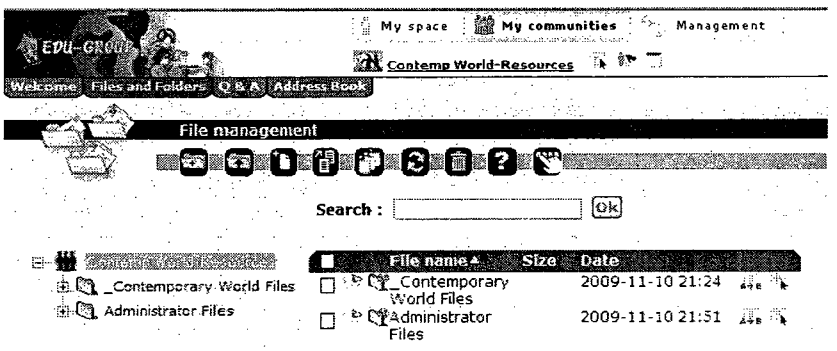


Figure 22: Example of Files and Folder function in beginner template

intermediate/advanced session. In the future, after obtaining valuable feedback from participants, I think it would be beneficial to create two separate templates. The beginner template would be simpler, intended for teachers who only want to share their lessons and assignments. I would be able to do this by only having a files and folders tab where teachers can upload their files so students can download them like email attachments. The teachers can organize them into categories in files and students will be able to see where their lessons and assignments are easily. There would be no viewer to see the files therefore teachers would not have to convert the files into PDF format. This template would be created for those teachers who do not care about the way their community looks aesthetically and want a quick and simple way to share their lessons and assignments.

Teachers who do not mind putting in the extra time and want to have more functionality with their community will use the intermediate/advanced template design (the original design) where they will be able to use the different tools (information tools, time management tools, communication tools, and mind tools). This template will be useful for teachers who are interested in using it for problem based learning because they will have access to the discussion tools which promote collaboration amongst students in the class.

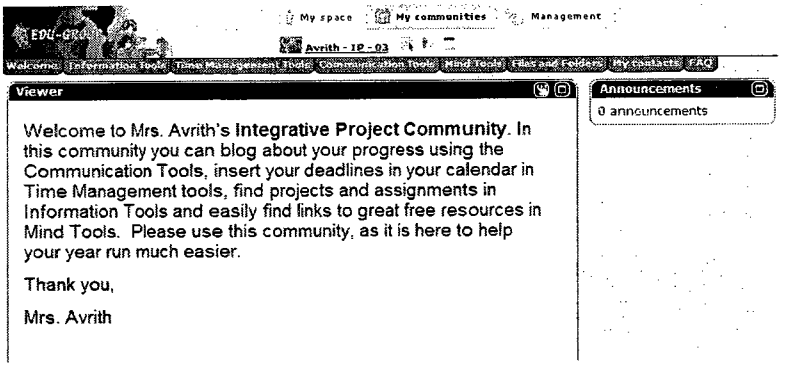


Figure 23: Example of Intermediate/Advanced template

Possible Future Usages of Design

With the feedback from the participants at the workshop and my personal use throughout the year I have come up with a variety of recommendations for possible improvements to the template and how the current template can be used more effectively.

RSS Feed

After testing the template throughout the year I realized that I would like to incorporate a RSS feed. A RSS feed (Really Simple Syndication) is a web feed that frequently updates published works. Users receive the latest content from selected sites without having to visit them at one time (Huber, 2010). For example, for my contemporary world community, I would like to have a feed from CBC for recent news updates. I could also have my media students signed up to different blogs on topics that are discussed in class, relating to media literacy or video production. It would also be used as a research tool for students in my class when I assign research projects. By having the latest news feeds on current events and other topics relating to class, students would have access to valuable information at their fingertips. The RSS feed ultimately will provide opportunities to consume, create, and share information and ideas (Huber, 2010)

Calendar

I would require my students to use the calendar from the time management tools on a daily basis. This tool is currently available to the students on the template. The calendar can be used as a tool to reinforce self-regulated learning with the students. According to Nicol & Macfarlane-Dick (2006), self-regulation is manifested in the active monitoring and regulation of a number of different learning processes. Three examples that Nicol & Macfarlane-Dick (2006) address which relate to the use of the calendar and self-regulated learning include, setting learning goals, strategies used to achieve the goals, and the management of resources. In all three cases, by expecting to put in their due dates from all their classes and check periodically for announcements from the teacher, they are self-regulating their own learning. The use of the calendar was already part of the original design however it was not being used to its full capacity. I realise that it is important for the teacher to encourage, or possibly make the calendar mandatory for class use.

Video Links

Having a section with links to educational videos that could be used as reference for student projects would be an effective teaching tool for educators. Teachers would be able to attach links to educational videos that students could reference for in-class lessons and assignments and larger take-home projects. Research have shown (Romanov & Nevgi, 2007) that students who watched video clips were more active is using collaborative e-learning tools and achieved higher course grades. With the video links available to them they might be motivated to extend their learning by viewing videos that relate the topics discussed in class. Students would also be able to share videos that they found interesting with fellow peers by adding the links. Students who create videos (like in my media class) would be able to share their videos as well.

E-Portfolio

An electronic portfolio is a digital container capable of storing visual and auditory content including text, images and sound. E-portfolios help organize content and help support a variety of pedagogical processes and assessment purposes (Abrami & Barret, 2005). When using the portal students have access to their own personal folder where they are able to upload and reflect on the progress of their work as well as to get feedback before work is handed in from their peers and/or the teacher. This element of the portal will be something that I will require all my students to use in the next school year. According to Abrami & Barret (2005), when students use e-portfolios, learning becomes more student-centered and more interactive as students engage in self-reflections, review goals periodically and assume responsibility for their own learning. The use of an e-portfolio is an excellent tool to get students to keep their work organized and have them review their progress throughout the year.

Training Plan (to improve participation)

I plan to have a follow up training session for interested teachers in the beginning of the next school year (2010-2011). This time, I will ask administration to allow me to have the entire day for teachers to work on putting their materials together. Even though teachers were

provided with training videos, many found it difficult with other school activities to put the community together. Therefore, by having that extra time they would feel more comfortable to get their communities up and running.

The training materials will also need to be improved. The video tutorials need to be fixed so that the last few seconds do not cut out. Screen shots can also be created on a job aide so that after the videos are watched the teachers can have a visual to guide their process.

In the following school year I think that it would be beneficial for teachers to share their resources and assignment on separate communities set by subjects and departments (i.e., Math, Science, History, and Contemporary World). By having resources readily available on communities using my template, teachers would be motivated to get onto the portal and get accustomed to using the template that I have created. The teachers need to see how they can use the portal in action so that they see its benefits and how it can be used with their students. Also, it would be useful to create a user guide with examples of how the tools on the community can be integrated into different curriculums for the teachers who show interest in using the communities but do not know how it can be used.

Conclusion

With a full year school year of testing, it is evident that the online community portal template that was created, if used properly in the classroom by the teacher, has the potential of helping to facilitate effective classroom practice. Highlights include collaboration amongst students, improve classroom management and serve as an effective communication tool amongst peers and the teacher. Training and implementation is an ongoing process that will need to continue in the following school year. The training materials created for the workshop were effective. However, providing the teachers with adequate time and support while they work on their personal communities is still an aspect that will need to be worked out with school administration. There are elements of design that will be improved based on testing and feedback which includes the development of a beginner template. The beginner template will need to be less sophisticated for users who would like to use it as a content management system as opposed to the more advanced template where teachers have a variety of functions

but need to go through more steps to get their work up and running. Also, future additions to the template will include: an area for RSS feeds, a place to insert video links and an improved E-portfolio where students will have files where they will be able to upload their work and comment on their progress. The user-friendly template that was designed to serve the needs of teachers and students was ultimately a success. With time and training, having more staff and students using the technology is a goal that is attainable.

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APPENDIX A: Sample Consent Form

SAMPLE CONSENT FORM TO PARTICIPATE IN RESEARCH

CONSENT TO PARTICIPATE IN

This is to state that I agree (_____) to participate in a program of research being conducted by Tanya Avrith of the Department of Education, Concordia University (514-234-5435)

A. PURPOSE

I have been informed that the purpose of the research is as follows: to study the perceptions, attitudes and feedback of the teachers being trained on how to integrate the portal community template in hopes of improving future template models.

B. PROCEDURES

The study will take place at Riverdale High School, on November 8, 2009 during a Pedagogical Day in the computer lab located in room 319. Teachers will be provided with a 60-90 minute training session on how to use the computer supported learning environment template for the school portal. The training session will look at the benefits of using on online community, and practical strategies for use in the classroom, how this online community can be integrated into the classroom to accompany the curriculum. Finally, step -by-step guidance on how to technically use the online community as a learning tool will be provided. Hands-on resources will be given to the teachers attending the training session.

Teachers will be asked to complete two questionnaires, one prior to the training session and the other once the training is complete. The first questionnaire will ask a variety of open and closed-ended questions. It will ask for the opinions of how teachers view the portal and what they know about computer supported learning environments and what they would consider to be effective training methodology in order to motivate them to integrate this technology into their curriculum The second questionnaire will look at the opinions of the teachers after the training session is completed. Further hands-on training will be provided to individuals who show interest of using this technology with their classes. The training will be an ongoing process until the end of the school year. Individual interviews will be conducted with these few willing

participants during the year to view their attitudes, perceptions and feedback in hopes of improving the design and implementation of the template for the online community.

C. RISKS AND BENEFITS

The teachers in this study will be exposed to innovative technology. By participating, the teachers will have practical training on the technical aspects of the technology. They will also leave the session with a variety of hands-on resources to help them with the planning and integration of this technology in their curriculum. Teachers will also have the opportunity to use this template in their own classes while being provided with assistance from trained professionals.

D. CONDITIONS OF PARTICIPATION

- I understand that I am free to withdraw my consent and discontinue my participation at any time without negative consequences.
- I understand that my participation in this study is CONFIDENTIAL (i.e., the researcher will know, but will not disclose my identity)
- I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

NAME (please print) _____

SIGNATURE _____

If at any time you have questions about your rights as a research participant, please contact Adela Reid, Research Ethics and Compliance Officer, Concordia University, at (514) 848-2424 x7481 or by email at areid@alcor.concordia.ca.

APPENDIX B: Pre-Training Questionnaire

NAME: _____

Pre – Questionnaire

1) How long have you been teaching? _____
(If this is your first year, indicate 0. If last year was your first, indicate 1, and so on)

2) What subject area(s) do you teach?

_____
_____
_____
_____
_____

3) Define the term "**Technology Integration**":

_____
_____
_____
_____
_____
_____
_____
_____

4) Please select your preferred teaching methodology (**choose only one**):

A. Largely teacher-directed (e.g., teacher-led discussion, lecture)

B. More teacher-directed than student-centered

C. Even balance between teacher-directed and student-centered activities

D. More student-centered than teacher-directed

E. Largely student-centered (e.g., cooperative learning, discovery learning)

5) Please indicate how often you integrate computer technologies in your teaching activities:

A. Not at all
B. Rarely
C. Occasionally
D. Frequently
E. Almost Always
F. All the Time

6) Please describe the types of technology you integrate in your teaching and describe how you use them:

7) What would make you willing to integrate more technology in your classroom teaching?

8) Please read the following descriptions of proficiency levels a user has in relation to computer technologies. Determine the level that best describes you and circle the corresponding letter on your answer sheet.

A. **Unfamiliar**
I have no experience with computer technologies.

B. **Newcomer**
I have attempted to use computer technologies, but I still require help on a regular basis.

C. ***Beginner***
I am able to perform basic functions in a limited number of computer applications.

D. **Average**
I demonstrate a general competency in a number of computer applications.

E. **Advanced**
I have acquired the ability to competently use a broad spectrum of computer technologies

F. **Expert**
I am extremely proficient in using a wide variety of computer technologies.

9) Please read the descriptions of each of the six stages related to the process of integrating computer technology in teaching activities. Choose the stage that best describes where you are in the process and circle the corresponding letter.

A. **Awareness**
I am aware that technology exists, but have not used it – perhaps I'm even avoiding it. I am anxious about the prospect of using computers.

B. **Learning**
I am currently trying to learn the basics. I am sometimes frustrated using computers and I lack confidence when using them.

C. **Understanding**
I am beginning to understand the process of using technology and can think of specific tasks in which it might be useful.

D. **Familiarity**
I am gaining a sense of self -confidence in using the computer for specific tasks. I am starting to feel comfortable using the computer.

E. **Adaptation**
I think about the computer as an instructional tool to help me and I am no longer concerned about it as technology. I can use many different computer applications.

F. **Creative Application**
I can apply what I know about technology in the classroom. I am able to use it as an instructional aid and have integrated computers into the curriculum.

10) What is your understanding of an online community?

_____

_____

_____

_____

11) Have you ever used an online community for teaching? **YES** **NO**

If **YES**, which one(s)?

12) Are you currently using a community through the portal? **YES** **NO**

If **YES**, please describe how you are using the community?

If **NO**, what would make you more interested in using one?

13) Please describe the features of the portal that you use and explain how you use them.

Are there any features of the portal that you think can be improved? Please explain.

*Some questions borrowed from Wozney et al. (2006).

APPENDIX C: Post-Training Questionnaire

NAME: _____

Post - Questionnaire

1) Did the training session clarify how to get started on creating and using a community in your own class? **YES** **NO**

If **YES**, please explain:

_____
_____
_____
_____

2) Did the training session change your views on using a community in your own class?

YES **NO**

If **YES**, how?

_____
_____
_____
_____
_____

3) Did you find the community building resources useful? Please explain.

_____
_____
_____
_____
_____

4) How can the resources be improved? Please explain.

5) Please describe what you found useful from the workshop:

6) Please explain what could have been improved during the workshop:

7) Do you feel comfortable creating a community on your own? **YES** **NO**

8) Will you create a community for your own class? **YES** **NO**

If **NO**, please explain why:

9) If you answered "**NO**" to the previous question, is there anything that might change your mind? Please explain:

10) If you decide to create a community on the portal, will you use the 'Avrith Template' that was described during the workshop for your own community?

11) What would you like to see changed/improved/ included within the template? Please elaborate.

12) Would you be interested in further training to create your own class community on the portal? **YES** **NO**

13) COMMENTS:

APPENDIX D: Activity Provided at Workshop

Welcome to Mission Community Building...NOT so impossible!

Here is your mission to get started on your very own community.

Please take a moment to allow for videos to load. Every time you watch a video, you will try it yourself. If you need help don't be shy, ask your expert community helper to assist you.

Step 1) Watch Video **4**: How to Define Community Pages

Step 2) Watch Video **5**: Explaining icons next to your community

Step 3) Watch Video **7**: Importing students onto community

Step 4) Watch Video **8**: Creating a public folder - go ahead and try for yourself

Step 5) Watch Video **9**: Creating subfolders to organize uploaded data

Step 6) Watch Video **10**: Uploading files and saving them so that they can be seen in the viewer – For this step you will need to use a file to upload. Each one of you was given a CD at the beginning of this workshop. Insert it on the computer you are using and open it up. On it you will find many different folders, you will select the file under the folder "PDF Files" when you are asked to in add a file.

Step 7) Watch Video **11**: How to save a file so that it shows up in the viewer.

Step 8) Watch Video **12:** Adding announcements.

If there is time in the session you can watch Video 13 and 14 on using the Calendar and Forum to create opportunities for blogging and collaboration.

There is still so much to learn...but not enough time. Please use this FAQ page whenever you need help. I will be adding more and more videos throughout the year to teach you how to advance your community to include, RSS feeds, Videos, Chat and to personalize the template to better suite your students specific needs. It is important that you understand that learning how to create these communities takes time and a lot of hands on practice so if you do not get it right away don't be discouraged you will get it.

Please make sure that you fill out my questionnaire before you leave.

Thanks for coming. I hope that I was able to help you.