

POSSIBILITIES AND LIMITATIONS IN IMPLEMENTING GROUP-BASED ROLE PLAY ACTIVITY IN AN ONLINE COURSE TO ENHANCE LEARNING OF INTER-CULTURAL FACTORS IN GLOBAL VENTURES

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Abstract

This paper examines the design and implementation of a group role play activity in an online course, to identify what makes the activity purposeful and what challenges are faced. Instructional factors need careful planning to ensure learning outcomes are met and student groups are engaged. Virtual environments such as Second Life hold much promise in enabling synchronous interaction, but need wider support from other departments. Nevertheless, online learning systems such as D2L provide fairly adequate means of student interaction. The paper concludes that it is possible to engage students in online group interactions fairly successfully using available online learning systems.

Introduction

With the onset of the Internet several post-secondary courses are now online. In the process, some advantages of the face-to-face classroom, like group interactions in role play activities, are lost or need to be re-designed.

In an online course delivery environment, what instructional strategies and technologies facilitate student group activity? This paper focuses on the instructor's role in designing the activity tool, from identifying the learning outcomes for the activity, to researching relevant content that will help achieve the learning outcomes, investigating the availability of technical software that will enable students to interact in groups, preferably synchronously, to initiating and implementing the activity in a given term. While the students are key players, this paper discusses their overall participation as observed by the instructor in relation to the implementation of the activity.

As Dreher et al. (2009) and Resta and Laferriere (2007) point out, the increasing population of digital natives necessitates that post-secondary educators adopt new technologies in course delivery that students are familiar with and/or enjoy the challenge of experimenting with (e.g., 3-D virtual environments): "The continued growth of Web 2.0 and Virtual Worlds will likely force educational institutions to

move with the technology, or fall behind as social institutions that are increasingly irrelevant to industry and community life in general” (Pesce, 2008, as quoted in Dreher et al., 2009). Post-secondary instructors are increasingly taking the initiative to design and deliver online collaborative learning activities in attempts to engage their students in meaningful knowledge acquisition.

Online delivery of education has been around for several years now and much research has been conducted on the subject. In addition, computerized technology is evolving at light speed, and several educators are eagerly incorporating new technologies in their teaching and learning strategies. Thus, research continues in both these key areas. Collaborative online learning is being tried and tested in a variety of academic disciplines from medicine/health (Alexander et al., 2003; Carbonero et al., 2008; Kamel Boulos et al., 2007; Reeves & Reeves, 2008) to geography (Ray, 2009); business communication (Starke-Meyerring & Andrews, 2006); MBA programs (Schiller, 2009); and IT education (Hutchinson, 2007; Wang & Braman, 2009).

The Project

With the transfer of the British Columbia Institute of Technology’s Liberal Studies course LIBS 7007 Technology Across Cultures¹ from F2F to the Net, group activities needed to be re-created for the online environment. An instructional enhancement grant was awarded to develop an online simulation activity for student groups to experience how cultural factors impacted global business interactions.

In an attempt to enhance student engagement, the instructor experimented with the Second Life virtual environment portal. The D2L (Desire2Learn) website, which is the online learning system used to deliver the course, includes facilities for online discussions and group folders. These facilities were used to enable group interactions. Each student group submitted a progress report and a final report. The project is described in detail in the Discussion section.

The project was administered to students in a LIBS 7007 online section during the Spring 2010 term. As the section was offered through part-time studies, students were from a variety of program areas — Accounting, Business Administration,

¹ LIBS 7007 Technology Across Cultures is an elective 3-credit course offered at the British Columbia Institute of Technology. The main objective of LIBS 7007 is to get students to critically examine technology. Bachelor’s degree students are required to take two elective LIBS (Liberal Studies) courses to fulfill degree requirements.

Environmental Health, Nursing, Forensic Investigation, Network Administration & Security, and Construction Management.

The Question

The main question was: What are possibilities and limitations in the process of creating and implementing online group activity for learning purposes? This question has been asked several times (e.g., Kear, 2004; Resta and Laferriere, 2007; Schellens et al., 2007) and needs to be asked continuously as educators are confronted with new emerging technologies which they are compelled to adopt in order to engage students and maintain currency.

In this paper, two areas addressed in detail are the design and implementation of the group activity and the use of technology. Though student participation is also a critical factor, it is addressed through instructor observations principally to identify areas for further investigation.

Instructional Factors: Designing the Activity

Constructivist pedagogy is employed in several post-secondary institutions as the preferred method of providing students with life-long learning skills; collaborative learning facilitates students' construction of knowledge through positive interdependence and individual accountability (Johnson, Johnson, & Smith, 2007). Collaborative learning methodology was in place in LIBS 7007 when it was transferred from F2F to a NET version. In the F2F version, interactive group simulations like Barnga² and Overpower³ have been successfully used in the classroom for students to learn about social, political, and psychological factors that operate in today's inter-cultural workplace. The objective of the online activity was to "enable students to participate in inter-cultural situations through which they experience how people of differing cultures perceive things differently or play by different rules, and learn that they must understand and reconcile these differences in order to function effectively in a cross-cultural group" (Abraham, 2008). This objective addressed the following

² "Barnga" is a group simulation game and a learning exercise on intercultural communication (Thiagarajan, 2010).

³ "Overpower" is a group simulation activity designed to give students experience with social class structure (originally designed by W. Strom of Trinity Western University, Langley, BC, Canada; adapted by N. Abraham in 2004).

learning outcomes of the course, i.e., to give Bachelor of Technology students the opportunity to:

- critically analyze factors that influence the implementation of technology in order to understand why and how technological systems survive or fail in various regions and
- critically analyze factors in the transfer of technology from one region of the world to other regions, in order to evaluate the advantages and disadvantages of technology transfer as it affects the receivers and the originators.
(LIBS 7007 course outline, 2010)

In determining a case study for the activity, the instructor needed to create a scenario with real-world content that necessitated interactions between groups from different cultural regions, and led to the need for decisive conclusions. It had to meet the following pedagogical needs:

- address the main objective of the course (learning outcomes),
- inculcate student interest by choosing content that is ‘universally’ interesting, contemporary and applicable to students from a variety of program areas (engineering, business, and health),
- ensure a balance of complexity and comprehensibility,
- encourage positive interdependence and individual accountability, and
- enable the achievement of the activity’s objectives within the course deadline.

In order to provide online students with simulated experience in inter-cultural differences in business negotiations, the instructor researched various possibilities that would necessitate interactions between culturally different regions, and identified the topic of technology transfer (this topic is an integral component of LIBS 7007). In the process of technology transfer typically the originator/manufacturer of the technology interacts with the purchasers/potential users to whom the technology will be transferred and who are often located in different regions.

Next was to identify a commodity for technology transfer. A key consideration was to build content of interest to students in a variety of programs, from business to health to engineering.

The real-life story of SELCO⁴ (Williams, 2005), which described the marketing of US solar energy technology to Vietnam, provided the idea of focusing on distributing wind technology to countries that are culturally different from the manufacturer and from each other. The choice of wind technology as a topic for the activity was based on the current popular interest in climate change and related perceived need for alternate energy sources. The need for alternate energy sources is recognized worldwide, and thus the topic provided the opportunity to include a variety of cultural worldviews in the activity, assuming that the need for alternate energy technologies will differ across different regions based on local political, economic, social, and cultural factors.

A case study was constructed with the manufacturing organization (named WinFAP, i.e., Wind For All Peoples) based in Canada (CAN). The countries seeking the technology were New Zealand (NZ), the Democratic Republic of Congo (CONGO), and the Philippines (FILI). In each of the countries, two groups were constructed — a government ministry of energy (GOV so then CANGOV, CONGOGOV, NZGOV, FILIGOV), and an organization interested in purchasing wind technology (ORG — CANORG, CONGOORG, NZORG, FILIORG) (for Canada, the organization was the manufacturer of wind technology).

Keeping groups small and providing spaces for interaction are vital to online collaboration (Hutchinson, 2007). Eight groups of 2–3 students each were created to represent the relevant government bodies (i.e., GOV), the manufacturer, and the potential buyers of the technology in each country (i.e., ORG). The scenario consisted of organizations that needed to make decisions at various points, e.g., information gathering, manufacturing, financing, licensing. In order to make these tasks achievable within the timeframe of the course, more than one student was needed to accomplish the tasks for each “organization.” To establish individual accountability, each student was assigned a specific role within each group. For example, the Canadian manufacturer group (CANORG) consisted of the Director, Technology Expert, and Marketing Officer; the Congo government group (CONGOGOV) consisted of the Deputy Minister for Energy and the Energy Generation Advisor, and so on.

The groups communicated within themselves to determine their respective strategies. For this purpose, a group folder was created for each group i.e., there were eight group folders for intra-group interaction. Each group had to also interact with at least one other group to negotiate the terms of implementing the technology in their region and purchase of the technology (inter-group interaction). Seven discussion folders were created for the inter-group interactions, which took place between various two groups (i.e., three-way group interaction was not needed).

⁴ SELCO = Solar Electric Light Company

The tasks for the respective groups were defined by the instructor, and included research into their respective country's conditions, culture, and worldview. Positive interdependence was necessitated throughout the group activity. Within each group (intra-group interaction), the members needed to plan how they would achieve their assigned tasks, decide how they would share the tasks and collaborate in composing the two reports. Each member would be individually accountable for their part of the task. Interdependence was also necessitated between groups (inter-group interaction), because in order to achieve their goals, each group needed to interact with other groups, and thus depended on responses from the other groups.

To conclude, each organizational group had to report whether they would purchase the technology or not, based on interaction with the manufacturer and their respective governments. Each governmental group needed to conclude by reporting on how successfully it was able to provide information and support to its respective organizational group (i.e., CANGOV to CANORG, CONGOGOV to CONGOORG, NZGOV to NZORG, FILIGOV to FILIORG).

Instructional Factors: Administering the Activity

Once the design was ready, the instructor needed to administer the activity as follows:

- conveying instructions for the activity and ensuring comprehension of the instructions
- monitoring and encouraging regular participation, with additional direction as needed
- signalling the end of the activity and providing feedback.

Conveying Instructions

The nature of D2L necessitates that all course assignments are posted at the start of the term: the Dropbox (assignment page) lists the assignments and their due dates (start date, end date). Thus, the two assignments in the group activity, the progress report, and final report, were posted in the course Dropbox at the start of the course.

Clear instructions are key in creating positive learning (Hutchinson, 2007). Posting assignments linked to an activity necessitates that the activity needs to be explained in order that students understand the content and their assigned task. Documents providing detailed instructions for the activity, description of the scenario and roles, and a table designating roles to students were posted on the Content page in a module titled "Group Activity: WinFAP Role Play."

The Home page of a D2L course includes a "News" section where instructors post information to students. Every week, this page was used by the instructor to

introduce students to the week's topic and activities, and give any other information as needed. The first news posting (Week 1) explained how the course worked through the term, and introduced the group activity. Thus students were aware right from the first week of the requirement to participate in the group activity. However, the instructor needed to include a caveat that she would signal the start of the activity; this became necessary because the details of incorporating the Second Life environment were still in process when the course began (see next section on Technical factors for details). In Week 8, the instructor decided to start the activity despite the challenges of using Second Life. That week, the start of the group activity was announced by the instructor in her weekly 'News' message posted on the Home page, and students were directed to the Module (WinFAP Group Activity) on the Content page that contained documents with detailed instructions.

Monitoring and Encouraging Students to Participate

Student motivation was evident when they began participating immediately, i.e., as soon as the instructions for the activity were posted. Participation increased in the following weeks. In Week 10 the instructor thanked the students who had begun group interactions, and encouraged the others to participate. Students were encouraged to report all activity up to this point in the progress reports that were due in Week 10. All groups submitted progress reports which showed they had begun the research on their respective country's culture. In Week 11, the instructor reported in the News message that several students were participating.

Meanwhile, the instructor continued attempts to incorporate Second Life, which meant creating the avatars for student use. However, it was discovered that one individual (the instructor) could not create multiple avatars. Therefore, in the same week as increased student participation took place (Week 11), the instructor informed the students about the need to limit access to the Second Life environment to a few students. These students were encouraged to attempt meeting in the Second Life environment to discuss technology options. The News message for Week 12 encouraged students to continue with the activity, and recapped the main points they needed to cover. It also noted the challenges in using the Second Life environment.

Some students used the website e-mail to ask questions about the activity. The instructor responded promptly both via e-mail and by addressing the question on the Home page in the weekly News item, so that all students could benefit.

Signalling the End of the Activity

In Weeks 14 and 15, the instructor thanked the students for participating in the activity. All groups submitted their final reports by the deadline at the end of Week 14. Feedback was provided via the Dropbox. The final reports demonstrated that students had achieved the learning outcomes of researching and critically examining the infrastructure, government policies, communication

cultures, and needs of specific groups to determine the suitability of wind technology for their respective countries.

Technical Factors: Experimenting with Second Life

In the learning environment, synchronous online interaction is preferred to asynchronous interaction (Kamel Boulos et al., 2007). While investigating various possibilities of available software that could enable synchronous online meetings, provide the potential for visualizing different cultures, and add interest to the activity, the Second Life 3D virtual environment portal was recommended. BCIT had entered into a licence agreement for use of this portal, and instructors were being encouraged to experiment using the BCIT “island” in their courses and/or research. The LIBS 7007 instructor took some tutorials to familiarize herself with Second Life, and was given access to the portal through the BCIT licence.

Second Life in Higher Education

The Second Life virtual environment was launched by Linden Lab founder Philip Rosendale in 1999 in San Francisco. Its stated mission is “to connect us all to an online world that advances the human condition” (Linden Research, 2009). Second Life includes a section for Education and educators, and some post-secondary institutions using the Second life portal are The Open University of the UK, the University of Texas at Austin, and Loyalist College in Ontario. Courses most suited to the use of Second Life are those where visuals are directly related to the subject, e.g., oceanography, architecture, and the health sciences such as nursing. Improvement in students’ learning and motivation as a result of incorporating Second Life into a course has been reported by Wang and Braman (2009), Schiller (2009), and Kamel Boulos et al. (2007). Some concerns have also been reported (Rapanotti & Hall, 2011).

Second Life in the LIBS 7007 WinFAP Group Activity

The role of Second Life in the WinFAP group activity was principally to provide a synchronous environment where online students could discuss and receive instant feedback, and thus arrive at decisions faster than if they were communicating asynchronously by posting their ideas and comments in a shared group discussion folder.

In order to use the Second Life environment, students needed to be assigned ‘avatars’ and given access to the virtual life portal. The feasibility of providing access to students needed to be addressed through the Institute’s licence for Second Life. Two steps needed to be taken by the instructor: 1.) to design a process by which students could access Second Life through BCIT’s licence, and 2.) to create the Second Life ‘avatars’ to which students would be assigned.

One of the considerations in creating the group activity was to have a secure time-bound environment available not just for one group of students but also for future

student groups. To this end, it was proposed that aliases be created through Second Life that could be passed on to students from one term to the next. Also, generic e-mail IDs were needed that were linked to an authentic e-mail account provider.

Because students are registered for one term only (15 weeks) in the LIBS 7007 course and are at various stages of their degree programs, it was not possible to give students independent individual access to Second Life using their real names and BCIT e-mail addresses. The course instructor was therefore provided with a dedicated e-mail access account for the purpose. A set of aliases were created to access the e-mail account, and these aliases were linked to the various roles in the activity. Based on their assigned roles, students were given the alias e-mail addresses.

The creation of Second Life ‘avatars’ to represent the case study roles had to be undertaken by the instructor. In order to create an ‘avatar,’ the instructor had to log in to Second Life, select a first and second name from a given list, and provide an e-mail address. The instructor then had to create the avatar, i.e., select the visual representation (physical features of face and body, dress, hair). The instructor began the process of creating avatars and assigning them to the roles in the case study, but was able to create only ten avatars before the Second Life portal stopped the process stating that only a limited number of avatars could be created by one individual.

Therefore, the instructor redesigned the Second Life component to be accessed by half the class.

Students who were assigned the role avatars then attempted to log in to the Second Life environment, and met with various challenges. Several students reported inability in accessing the virtual environment, mostly because they needed to download the software onto their computers, which in many cases was not possible depending on the students’ PC and laptop capabilities. In the end, only one student was able to successfully log in with her avatar and visit the BCIT Island. The instructor had to encourage the students to continue their case study interactions through the group discussion folders on the course’s D2L website.

Technical Factors: Using D2L

Founded in 1999 and located in Canada, Desire2Learn Incorporated (D2L) is a global provider of enterprise e-learning solutions and develops online learning management systems for schools, higher education, associations, government and private industry” (Sensagent, n.d.). A range of higher education institutions use D2L to deliver online courses (Desire2Learn, n.d.).

The LIBS 7007 students did not report any challenges in accessing the D2L course website for regular course work, and demonstrated their ease in using the website by routinely accessing materials on the Content page, regularly posting comments on the various course topics in the Discussions page, and e-mailing the instructor as needed. This demonstrated familiarity with online course formats is not surprising, considering that the Internet has been around for at least 10 years, giving urban students the opportunity to learn and practice how to access and navigate a variety of websites (Dreher et al., 2009; Resta & Laferriere, 2007). The concerns expressed by researchers of even a few years ago (Zafeiriou et al., 2001) that students are expected to study in online environments without adequate training may no longer be valid.

For the purpose of the WinFAP group activity, the ability to create separate folders in D2L for small groups was used in order to provide students with a forum to 'meet' in their assigned group roles. Students were less familiar with accessing group folders on the Discussions page, and some students asked the instructor (via e-mail messages) for directions. About two weeks into the activity, all active students participated. Although most of these students were unable to access the Second Life environment, they continued and concluded the activity through the group folders on the course's D2L website (a few students reported using external channels like the telephone and text messaging in addition to the D2L group folders).

In the end, the D2L (Desire2Learn) website, with facilities for online discussions and group folders, proved adequate. Using these facilities was practical and efficient in generating student participation as students were in a secure environment and familiar with navigating the website.

Student Factors

The success of online course delivery is typically measured by examining student participation (Carbonaro et al., 2008; Hutchinson, 2007; Kear, 2004). In this study, student participation is not the primary focus, but has been reviewed at the macro level, to identify particulars that can be studied in the future. Two factors were identified as integral to the operation of the student assignment: group dynamics and communication strategies.

Group Dynamics

Groupwork, or teamwork, was the basis of the WinFAP activity. To achieve the goals of the activity, both intra-group interaction and inter-group interaction were needed. As observed by the instructor, the two types of group dynamics functioned as follows.

Intra-group interactions. Based on the instructor's spreadsheet assigning groups and roles, and the creation of group discussion folders on the D2L course website,

most students were able to access their respective groups and begin interaction within their group. This was evident from the online discussions that took place within the first two weeks. An observation of the discussion streams showed a variety of comprehension among the students, with some students understanding the expectations and accomplishing the task ahead of others. These students often took the lead in doing the required research and sharing their results with their group-mates. In one or two groups, only one student was active and had to submit the reports on their own, stating that they had not heard from the others. As Kear (2004) found, ensuring individual peer commitment to the group task is especially challenging in an online course, as privacy issues often prevent other means of contact. Through intra-group discussion, students prodded each other to complete the two reports, reminding others of the due dates, and offering to do their part.

Inter-group interactions. After the initial stage of intra-group interaction which established each group's tasks and worldview, the groups had to contact a respective other group to ask for information (organization to government, potential buyers to manufacturer), convey information (government to organization, manufacturer to potential buyers), and discuss the possibility of implementing wind technology in their respective countries (potential buyers-manufacturer-potential buyers). At this inter-group interaction point, a few students expressed confusion about their tasks, and needed clarification from the instructor. Other students discussed their roles within their groups and figured out that they needed to contact other groups to proceed with the activity, either to request information about wind technology, or apply for permissions from their respective governments, etc. Considerable wait times were noted in interactions between groups — i.e., a group would send out a question and then have to wait for a response for 1–2 weeks. Towards the deadline for submitting the final report, each group arrived at its own conclusions regarding wind technology, and composed a comprehensive report on their part of the activity.

Communication Strategies

Through observing the group interaction discussion streams as they occurred through the course, the instructor identified strategies used by students. These strategies were categorized based on the communicative expression that occurred in the online setting. The categorization was broadly based on the concept of speech acts described by Blum-Kulka (1989). The categories identified in the WinFAP activity were as follows:

Positive:

- taking the initiative to start the task and take the next step
- responding actively with ideas
- constructing scenarios
- doing and sharing research

Neutral:

- responding passively (agreeing only)

Negative:

- expressing challenges with the task
- expressing challenges with personal issues e.g., time management, other courses.

Further research needs to be conducted to investigate how these communication strategies are linked to student motivation and achievement of learning outcomes.

Conclusions, Possibilities, Limitations

Overall, the WinFAP group activity was successful in that all the student groups were able to interact through the D2L course website, share ideas and strategies, arrive at decisions and submit progress and final reports. The use of the Second Life environment portal was challenging and more planning is needed for such use of technology to be successful.

The group discussion feature and news postings on the Home page of the D2L online learning system were primarily instrumental in facilitating student interactions. Students were able to access the group folders quickly and began interacting as soon as the start of the activity was announced in Week 8. The instructor was able to post instructions and encouragement on the Home page through the news postings feature, as well as check group interaction progress by accessing the group folders. Non-technical factors like student familiarity with Internet use and motivation in completing the requirements of the course were also likely instrumental. Although student factors were not the focus of this study, an examination of the discussion streams showed evidence of positive group dynamics and motivational communication strategies that culminated in comprehensive reports submitted by all groups.

In the implementation of this group activity, the limitations were primarily technical. The instructor as primary facilitator needs to acquire an in-depth understanding of how the technology works and what institutional and technical support is needed. Differences in students' access to computer hardware and software were barriers in implementing the Second Life portal. When integrating collaborative learning pedagogy with online education, institutional factors often emerge, particularly, as Resta and Laferriere (2007) point out, the level of support provided and ongoing student access to software and equipment (e.g., computer labs, e-mail platform for students). Alexander et al. (2003) also noted that technical assistance needs to be available outside of traditional office hours, and university policies need to value the time and skills invested by faculty in online course development.

The challenges notwithstanding, this first attempt to implement online group activity in the LIBS 7007 course incorporating Second Life can be seen as a pilot study whose lessons can be used in future implementation of virtual environments in online student group activities:

- capitalize on student familiarity with the Internet when designing interactions,
- support and encourage student motivation to achieve learning outcomes,
- construct accessible and secure folders for group interaction, and
- incorporate technical facilities that will provide extended hours of online support and secure off-campus student access to software and learning systems.

Further research is recommended that focuses on student participation strategies in online group activities and their relationship to technological and non-technological factors.

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