DOCUMENT RESUME

ED 462 944 IR 021 102

AUTHOR Reinhart, Julie; Slowinski, Joe; Anderson, Tiffany
TITLE Cross-Country Conversations: Techniques for Facilitating Web-Based Collaboration.
PUB DATE 2001-06-00
NOTE 10p.; In: Building on the Future. NECC 2001: National Educational Computing Conference Proceedings (22nd, Chicago, IL, June 25-27, 2001); see IR 021 087.
AVAILABLE FROM For full text: http://confreg.uoregon.edu/necc2001/program/.
PUB TYPE Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Computer Mediated Communication; Computer Uses in Education; *Cooperative Learning; *Discussion (Teaching Technique); *Group Discussion; Higher Education; *Instructional Improvement; Teamwork; World Wide Web
IDENTIFIERS Collaborative Learning; Indiana University Bloomington; Indiana University Northwest; North Carolina Agricultural Technical State Univ

ABSTRACT

This paper describes an online collaborative process among three university classes in a cross-country project. Two of the classes were undergraduate courses at the Indiana University Bloomington and Northwest campuses, and the third was a graduate course at North Carolina A & T State University. Each course was a traditional campus-based course whose instructors agreed to have their students participate in the cross-country collaboration. Participation counted for a small portion of the grade. Students were group into teams of four that worked together throughout the semester. There were 12 teams, most consisting of at least one student from each campus. The project consisted of five two-week long online group discussions using SiteScape Forum, a World Wide Web-based discussion board and file-sharing tool. There were two main features of SiteScape that the students used--the user profiles and the discussion boards. Each group had their own discussion area, and there was a common discussion area for everyone in the three classes. Methods for facilitating collaboration included collaboration training, student introductions, thematic discussions, and modeling/coaching. Recommendations are provided to offer guidance on how to improve online collaboration. (Contains 10 references.) (MES)

Cross-Country Conversations: Techniques for Facilitating Web-based Collaboration

By: Julie Reinhart, Joe Slowinski, and Tiffany Anderson

Cross-Country Conversations: Techniques for Facilitating Web-based Collaboration

Julie Reinhart, Ph.D.
University of North Carolina at Greensboro
jmreinha@uncg.edu

Joe Slowinski, ABD, M.Ed., B.A.
Chadwick School
joe.slowinski@chadwick-k12.com

Tiffany Anderson
Duke University

Key Words: Web-based collaboration, preservice education, teacher-training, group-development, virtual collaboration

Introduction

Imagine you are a member of the 21st Century Teachers Network. As an active participant, you will strive to: build your own expertise in using new learning technologies; share your expertise and experience with colleagues; use your expertise with students as part of the daily learning process; work to make classroom technology available to all students and teachers. This is what we asked our students to do.

This paper describes an online collaborative process between three university classes in a cross-country project. Recommendations are also provided to offer guidance on how to improve online collaboration.

Theoretical Background

Prior to facilitating an online collaboration project, we must first understand group development and dynamics in online environments. First, online environments and traditional classrooms produce different social environments (e.g., environments impact interactions and group dynamics in different ways). While the means of communicating are different in online groups, the developmental stages that groups proceed through remain the same as in traditional face-to-face situations (McDonald & Gibson, 1998). Online course developers need to be aware of these stages in order to create environments that will facilitate successful online collaboration.

Shutz (as cited in McDonald & Gibson, 1998) posits that all groups cycle through the interpersonal needs of *inclusion, control* and *affection*. According to McDonald and Gibson (1998) *inclusion* refers to the group member's need to be attended to and recognized as a distinct person. *Control* refers to a continuum where a person might want to be in control of the situation while others on the opposite end of the continuum may want to be controlled and have their responsibility lifted. *Affection* refers to the need of the group members to have cohesiveness, support, acceptance and trust (McDonald & Gibson, 1998).

McDonald and Gibson (1998) found that the differences in group dynamics in online courses are not based on how the groups develop, rather in how they are able to overcome the communication barriers imposed on the groups by the online environment. The implications for practice for the successful facilitation and management of group interactions were for online educators to

encourage and model the appropriate collaborative behavior for the group and to create activities that would encourage sharing and cooperation. These two implications were intended to assist with addressing the *affection* need of the group development process. Additionally, they encouraged online educators to create activities that address the needs of *inclusion* and *control* in order to facilitate online collaborations further.

We will describe how our project addressed the group development needs of *inclusion, control,* and *affection* in order to facilitate online collaborations. We will also explain what we believe should be done in order to further meet the needs of the groups. The techniques used to facilitate collaboration were: online introductions, collaboration training, the use of thematic discussion topics and modeling and coaching.

The Project

Three "Computers in Education" classes were involved in the collaborative project. Two were undergraduate courses at different campuses of Indiana University, the Bloomington and Northwest campuses, and the third was a graduate course at North Carolina A & T State University. Each course was a traditional campus-based course whose instructors agreed to have their students participate in the cross-country collaboration. The students' participation in the cross-country collaboration accounted for only a small portion of their course grade.

Students were grouped into teams of four that worked together throughout the semester. We decided to have the teams stay intact throughout the semester in order to allow the groups to develop and build a cohesive collaborative team. There were 12 teams, most of which consisted of at least one student from each campus.

The project consisted of five two-week long online group discussions using SiteScape Forum, a Web-based discussion board and file-sharing tool. There were two main features of SiteScape that the students used, the 'user profiles' and the discussion boards. Each group had their own discussion area and there was a common discussion area for everyone in the three classes.

The method used to design and develop this project is discussed in detail in "Creating a Pre-Service Teachers' Virtual Space: Issues in Design and Development of Cross-Country Collaborations" (Reinhart, Anderson, & Slowinski, 2000).

Methods for Facilitating Collaboration

Collaboration Training

In the beginning of the semester each instructor provided the students with in-person basic training on how to work collaboratively with others in their online group. This training consisted of online collaboration techniques such as defining roles of members in the group, netiquette, establishing group goals, norms, etc. Additionally, we posted on the Web a few tips on collaboration techniques that addressed the specific group activities.

The goal was to provide students with training on how to work collaboratively with others online. We felt that the students needed to be aware of the complicated nature of collaborating in an asynchronous online mode as supported by McDonald and Gibson (1998). By providing training, we should have addressed all three interpersonal needs for group development and dynamics (*inclusion, control* and *affection*). For instance, we addressed *inclusion* by teaching the students about the importance of assigning roles to each member of the group. *Control* was addressed by explaining the importance of posting their summaries and synthesis drafts several days before the due date so that others could provide feedback, provide input, and truly collaborate on the final synthesis statement. We also addressed *control* by encouraging students to play a variety of roles in

their groups and to rotate responsibilities. Finally, *affection* was addressed by teaching the students about netiquette, how to provide constructive criticism and the importance of keeping in constant contact with others in the group.

We trained the students on online collaborative techniques with the hope that they would move forward with their projects using these techniques and hopefully build strong, cohesive, collaborative groups.

Introductions

Prior to participating in the discussions, we asked the students to provide brief introductions of themselves. Additionally, we asked them to upload digital photos of themselves to their user profile in SiteScape Forum. The students were encouraged, but not required, to post their picture to their 'user profile' in SiteScape Forum.

We did the 'Introductions' for two reasons. First to promote the students' need for *inclusion* by allowing the group to get to know each other as individuals. Second, to ease students into using the collaboration tool. For many of the students, SiteScape Forum was a new tool. By providing the students with an opportunity to post introductory statements about themselves we gave them an opportunity to practice the rudimentary skills necessary for using SiteScape Forum in a non-threatening risk-free manner. The goal was to promote their sense of efficacy and enable them to participate in the online collaborations.

Thematic Discussions

The discussions incorporated the concept of cognitive apprenticeship (Brown, Collins & Duguid, 1989; Lave & Wenger, 1991). By situating a learner in an authentic context and having her participate as a legitimate member, she will become a conscious creative member of the community and find legitimacy in the tasks asked of her. In our case, we drew on the 21st Century Teachers Network in an effort to acculturate our students into authentic professional practices.

There were five discussions assigned throughout the semester. Each of the five discussions had an overall theme. Each student in the group was responsible for writing a summary of an article that was uniquely assigned to them. The articles were on subtopics of the overall theme. Then, after each student wrote her summary, the group then worked off of the individual summaries and collaborated on a synthesis statement for the assigned discussion question for that round. This approach is recommended by Bonk and Reynolds (1997) to facilitate students' cooperative and collaborative learning on the Web because it "...enhances their processing of material, and the overall sense of interdependence and accountability among group members."

The theme and question for the five discussions follow:

1. Equity: How can each student have equal access to technology to maximize his/her potential to learn?

2. Acceptable use: How can I protect each student and myself when I utilize technology in my classroom?

3. Software evaluation: What do I need to consider?

4. Technology funding: How can I improve my instruction through obtaining more and better computer hardware and software?

5. Integrating technology: Based on everything that you have learned this semester and the readings that you have read for this interaction, how can teachers integrate technology into their instructional situation?

While we assigned the students specific readings, they were encouraged to incorporate into their discussions information from personal experiences, other class materials, or other outside resources. The assigned articles were just a starting point.

The goal was to design the discussions in a manner that would assure that everyone in each group played an important role in the collaboration process. The idea was that each team member would be an "expert" in different facets of the thematic discussion, which helped with the *inclusion* element of group development and dynamics.

Additionally, the hope was to address the *affection* elements of group development and dynamics by having the students build off of each other's work in order to make a new group synthesis statement. Also, the manner in which the discussions were designed allowed students to have as much or as little control over their input into the group project.

Modeling and Coaching

Modeling appropriate online collaboration behaviors was one of the recommended methods that educators could use to facilitate online collaborations (McDonald & Gibson, 1998). Through modeling, we were addressing the *affection* element of group development and thus creating a safe learning environment of acceptance and trust (McDonald & Gibson, 1998).

The main methods for communication were SiteScape Forum and Email correspondence. If they did communicate with each other via Email we requested that they include the instructors in the recipient list. This request gave us additional opportunities to observe how the groups communicated with each other. Through these observations we were able to either coach the students or model appropriate online collaborative techniques if necessary. Because of the unique nature of each group, we were able to provide guidance based on each group's specific situation.

Additionally, some of the coaching was provided during traditional face-to-face conversations. Because each course met on a regular basis we found that many students asked questions/advice of their local instructors before or after class-time regarding this project. Regardless of the mode used to coach or model behavior we were careful not to give unidirectional guidance, meaning that our way was the only way to solve the problem. Due to the constructivist nature of this project we based our guidance on the unique needs of the group and allowed the students to choose to take the advice or go in their own direction as recommended by Duffy and Cunningham (1996).

Providing the groups with sample synthesis statements so that they could see successful collaborative statements was another modeling technique that we used. The statements that we selected were from the project's first round of discussions. Thus, they were authentic examples of synthesis statements. We were careful to select very different, yet successful, approaches to creating the synthesis statement in order to provide the students with multiple perspectives. According to Bednar, Cunningham, Duffy and Perry (1992), by providing multiple perspectives we enabled the learners to take from the statements what they felt was useful to their particular situation. This enabled the different groups to reflect on their own group situation and then modify their group strategies accordingly.

Project Reflection

After the project was complete, we reflected on the project, specifically on the techniques that we used to facilitate online collaborations. Our reflection process included an informal review of the

following: our personal observations, electronic correspondence that was archived in SiteScape Forum and the Email that we received from the groups. We were unable to do a thorough analysis of the data because it came to our attention, late in the project, that some of the groups were corresponding with each other via Email and the instructors were not copied in on the correspondence.

By the time the second discussion was over, we felt that eleven of the twelve groups were progressing in the group development process (*inclusion, control,* and *affection*), some communicating better than others. However, one of the twelve teams was having extreme difficulties. Of the four students in the group only one appeared to be putting forth any effort with the project with little, if any, communication from the three other team members. The one student who appeared to be putting forth the most effort asked that she be reassigned to another group. Due to the extreme nature of their case, we were forced to break the team up and reassign the team members to other stronger groups. While we realized that changing the teams around mid-project could hinder some of the groups' dynamics we found the disruption necessary. We looked back at the results of the discussions, to see if changing the group memberships mid-project impacted the group outcomes. It appears that they were able to readjust and include the new individuals into their groups with little problem.

By the end of the project (the last two discussions), ten of the eleven teams appeared to have created a good group dynamic. By "good group dynamic" we mean the groups were functioning well together, individuals were taking care of their own group responsibilities, teammates were communicating and providing each other some type of feedback, and the teams were able to produce a final synthesis statement. However, one team appeared to be dysfunctional. This team simply was having great difficulties communicating with each other, individuals were not posting their article summaries, and no one appeared to know what was happening with their synthesis statements. Their fourth synthesis statement appeared to be rushed, it was full of typos, there was no coherent organization, and it didn't address the key issues. It appeared as though one person quickly put something together and posted it to the discussion board. It was clearly not a group effort. Additionally, by the time we were on our fifth and final discussion topic this team was unable to produce a group synthesis statement.

While we ended up with ten of the eleven teams having good group dynamics, meaning that they worked through the interpersonal needs (*inclusion, control* and *affection*) of group development, we found that, as the project progressed, several teams were having difficulties distinguishing between cooperation and collaboration. At this point it is important to explain our distinction between cooperation and collaboration. Panitz (1997) defines cooperation as "a structure of interaction designed to facilitate the accomplishment of a specific end product or group through people working together in groups." He defines collaboration in general terms as "a philosophy of interaction and personal lifestyle where individuals are responsible for their actions, including learning and respect the abilities and contributions of their peers" (Panitz, 1997). Bednar et al. (1992) provide a more descriptive definition of collaboration, to "...develop, compare, and understand multiple perspectives on an issue..." and "...to search for and evaluate the evidence for the (other) viewpoint." As you can see both cooperation and collaboration require good group dynamics. Further, cooperation is a necessary condition for collaboration (Panitz, 1997). Therefore, while we felt we were able to create an environment that fostered the development of well-functioning groups that were able to accomplish their tasks, we found that some groups needed more assistance than expected to move from cooperation to collaboration.

One way in which the lack of true collaboration manifested itself during the project was that some groups simply took the individual article summaries and simply "cut and pasted" the text together to create what they considered a synthesis statement. Individuals in the team would make comments on the "cut and paste" synthesis statement but they were not substantive comments. They were comments like, "nice job" or "I've fixed a few typos but other than that I think we should go with it." Hall and Hall (1991), who conducted a similar project, found that their

students provided the same types of surface-level feedback. While these teams were cooperating, they were not collaborating.

Eventually, with coaching and modeling we were able to move most of the groups towards a more collaborative effort. In hindsight, we believe that we should have furthered our training on collaboration by discussing methods for substantively integrating each other's ideas and perspectives into one group statement that incorporates as an integrative whole everyone's ideas. Also, we should have done more coaching and modeling of appropriate online collaboration techniques for our students online. We recommend that you divide the groups up with one teacher being responsible for providing coaching and guidance to a subset of groups.

Looking specifically at some of the other techniques that we used to facilitate online collaboration, we found that not all students participated in the "Introductions." The students were not required to participate in the "Introductions" therefore they were not graded on this facet of the project. The few that did not participate in this initial activity were also those who didn't do well with the project. It is difficult to say if the lack of participation in the "Introductions" led to the students not feeling included in the group, which led to a poor group dynamic. If this was the case, their need for *inclusion* was not met. Another possibility is that the students who didn't participate in the "Introductions" simply didn't want to participate in the project whatsoever. Also, there were a few students, who did participate in the "Introductions" and had difficulty with the group project. With additional samples, we could make a more definitive statement on this issue. But, the tendency of students, who failed to participate in this activity and who did not participate throughout may prove to be an important marker for intervention in virtual collaboration projects.

Finally, we recommend the use of rubrics for grading both the individual and the group synthesis statements. The rationale for this is three-fold; 1) rubrics help instructors guide their instruction; 2) rubrics themselves can be instructionally illuminating, and 3) rubrics help with consistent and objective scoring (Popham, 2000). These attributes are important when there are multiple instructors/graders and when the students are working in a new arena and need some additional guidance. Due to the nature of this type of project, the rubrics should focus on the thinking and collaboration processes as well as the groups'/students' ability to defend their statements.

Conclusion

We believe the thematic discussions were for the most part successful. By the end of the project most groups were collaborating with each other. While the project was successful for the majority of the students, some students needed a little more assistance. These were the students who might not have had their interpersonal group needs met.

Acculturation simply does not happen over night. And, projects similar to this are an acculturation process. Virtual collaboration projects require students to participate in several activities that they were unfamiliar (Web-based collaboration) with in an unfamiliar environment (Web-based collaboration tool). Not surprising, we witnessed a gradual improvement in collaboration with each effort. As we coached the students and modeled online collaborative behavior, the quality improved. But, more importantly, as each group progressed through a social process, becoming more familiar with each other and moving through their interpersonal needs (inclusion, control and affection), the quality of the group process improved.

In addition, our intervention efforts yielded significant changes in student practice. Upon retrospection, we would have offered more examples and guidance during the initial discussion topic. In future iterations of this project, we would begin the modeling from the very beginning. We believe that these changes would have made the project more successful for all the students involved.

We base these statements on our reflection and our informal review of the materials generated by this project. Further research needs to be done to examine the impact of several factors: thematic discussions and the level of authenticity; the impact of modeling and rubrics in virtual collaboration; measuring interpersonal needs and the subsequent impact of reaching these in collaborative projects.

Recommendations

1. *Social.* Provide opportunities for the groups to get to know each other as individuals, possibly utilize Web-based collaboration tools that enable video to introduce one another before the project.

2. *Collaboration Training.* Provide students with training on how to collaborate in Web-based environments. Making sure that the training teaches students about online group processes, overcoming online communication barriers, and the difference between cooperation and collaboration.

3. *Thematic Discussions and Authentic Context.* In addition to designing thematic discussions, attempt to partner with a school, organization, or school board (e.g., your students could operate as consultants). By creating these types of partnerships, the authentic element of the project can be maximized and the concept of situated learning and cognitive apprenticeship can be realized.

4. *Modeling.* Actively participate with your students at the beginning in an effort to model appropriate collaboration etiquette and processes. Provide examples of quality collaboration processes and finished products. And, use rubrics to provide guidelines that focus on the thinking and collaborative processes as well as the groups'/students' ability to defend their statements

References

Bednar, A. K, Cunningham, D., Duffy, T. M. & Perry, J. D. (1992). Theory into practice: How do we link? In T. M. Duffy and D. H. Jonassen (Eds.) *Constructivism and the Technology of Instruction: A Conversation.* New Jersey: Lawrence Erlbaum Associates, Publishers.

Brown, J. S., Collins, A. & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18,* 32-42.

Bonk, C. J. & Reynolds, T. H. (1997). Learner-centered Web instruction for higher-order thinking, teamwork and apprenticeship. In B. Khan (Ed.) *Web-Based Instruction.* Englewood Cliffs, NJ: Educational Technology Publications.

Duffy, T. M. & Cunningham, D.J. (1996). Constructivism: implications for the design and delivery of instruction. In D. H. Jonassen (Ed.) *Handbook of research for educational communications and technology.* New York: Simon & Schuster Macmillan.

Hall, S., & Hall, P. (1991). Between Schools: Inter-Classroom Collaboration (ERIC Document Reproduction Service No. ED 333481).

Lave, J. & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation.* New York: Cambridge University Press.

McDonald, J. & Gibson, C.C. (1998). Interpersonal dynamics and group development in computer conferencing. *The American Journal of Distance Education, 12,* (1) 7-25.

Popham, W. J. (2000) *Modern Educational Measurement: Practical Guidelines for Educational Leaders.* 3rd Edition. Boston, MA: Allyn and Bacon.

Panitz, T. (1997). Collaborative versus cooperative learning: Comparing the two definitions helps understand the nature of interactive learning. *Cooperative Learning and College Teaching, 8,* (2).

Reinhart, J., Anderson, T., & Slowinski, J. (2000). Creating a Pre-Service Teachers' Virtual Space: Issues in Design and Development of Cross-Country Collaboration. *T.H.E. Journal, 28* (3).

U.S. Department of Education
Office of Educatonal Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE
(Specific Document)

NOTICE

REPRODUCTION BASIS

☒ This document is covered by a signed "Reproduction Release (Blanket) form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☐ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").