



The Collaborative Learning Environment Integrating Smartboards and Videotechnology in the Classroom

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Abstract:

The creation of a model for the integration of technology with collaborative teaching and learning is the main goal proposed by a Collaborative Research Team at West Chester University, Clarion University, and the University of Wyoming. In this model, communication and collaboration connect students of different disciplines and distant geographical locations over the Internet. The existing model's structure, successful and unsuccessful collaborative learning experiences, and suggestions for creating and restructuring a collaborative learning model are discussed.

Summary:

Since 1992, a collaborative team at West Chester University has been creating a model for integrating technology into the classroom. Teachers and students currently utilize technology such as WebBoards, SMARTBoards, and videoconferencing as educational tools that teach collaboration over the Internet. Students of Group Dynamics at West Chester University and Psychology of Women students at Clarion University work together to merge their respective positions, ideas and theories on leadership and motivation for a final collaborative research paper. Project Guides at the University of Wyoming aid students in communicating their ideas and producing their final projects.

It is hypothesized that the use of interactive SMARTBoards and videoconferencing will expedite determination of task roles and other facets of collaboration such as clarification of ideas and development of research questions. Additionally, the enhanced "virtual classroom" may provide a platform to present research results while maintaining the benefits of the Internet. Successful collaboration will be measured with a collaborative communication scale, sociometric instruments, and the final collaborative research project.

Outline:

- I. Statement of Issue
 - A. Our effort is to transform education from its present state to one which affords students the opportunity to engage more actively in their educational experience. Hence, we seek to develop an educational process that would transcend mere informational exchange and knowledge acquisition, giving way to a more problem-based approach. Secondly, as the world progresses technologically, it is to our advantage to provide students with the skills necessary to compete in our "virtual" society. With that in mind, the use of SMARTBoards, WebBoards, and videoconferencing has been integrated into the curriculum; thus, giving the students a competitive edge in today's global economy.
- II. Overview of the Collaborative Model
 - A. Connecting with peers
 1. West Chester University
 - A) Reviewed the dynamics of teamwork in collaborating with groups electronically and face-to-face.
 - B) Examined: the foundations of groupwork, developmental stages of how groups evolve over time, group structure, how groups design systems of roles and inter member bonding, and the transformation of individuals from a bunch of unrelated persons into a cohesive group.

2. Clarion University
 - A) Studied the psychology of women and gender differences in terms of development, cognitive abilities and motivations, employment, social and personal relationships, stereotypes, love relationships, sexuality, and health.
 3. University of Wyoming
 - A) Provided project guides who:
 - 1) Model and teach effective communication and collaboration.
 - 2) Encourage and assist all team members to participate.
 - 3) Help clarify ideas, questions, and processes.
 - 4) Assist team members in finding and using resources.
 4. As a Collaborative Team
 - A) Students
 - 1) Produce a collaborative paper (i.e., gender differences in communication, metacognition, leadership style, or decision-making processes)
 - B) Professors
 - 1) Offer guidance and suggestions for effective and successful research proposals.
 - 2) Provide expertise and special knowledge not available within a team.
- B. Goals for the Collaborative Teams
1. Intro and class building
 2. Team Building/ Identity
 3. Group Building
 4. Identify Topic/ Focus of research proposal
 5. Creating a plan for the research proposal
 6. Developing a literature review
 7. Creating the literature review/ references progress report
 8. Developing hypotheses
 9. Creating the hypothesis progress report
 10. Creating the methods progress report
 11. Presenting of the research proposal
- C. Phases of collaboration
1. Making contact
 2. Tangram exercise
 3. Task clarification
 4. Duty/role negotiation
 5. Work
 6. Settlement and closure

III Anticipated Outcomes

A. The provision of an active collaborative learning environment:

1. Enables professors to provide a collaborative structure for electronic communication. The pedagogical format allows students to work together in teams providing active leadership in developing their collaborative research proposal.
2. Prepares students to collaborate with others to implement negotiating and interpersonal skills for the workplace and graduate school.
3. Demonstrates to students the importance of frequent and effective communication.

4. Allows students the opportunity to work on an equitable level with the collaborative team.
5. Emphasizes the importance of team identity (team name) and logo (symbolism) for effective collaboration.
6. Develops skills in using computer and video-technology as tools to enhance effective collaboration.

IV Importance and Relevance of the Study

A. We are confident that the findings of this study will be instrumental in the facilitation and utilization of one of the most fundamental tools that we, as human beings have – communication. Transcending the classroom, the business world, and even familial interactions, the ability to communicate effectively is central to all that we do. Thus, the collaborative study that we propose is important to every organization that: has the need to transfer information, uses teams to solve problems, or is seeking ways to effectively “bring together” people from diverse geographic locations. However, it should be noted that this list of applications is by no means exhaustive. In fact, the number of possibilities is endless as the long-range benefits and applications of the study evolve.

Previous presentations on this topic:

- Collaborative Inter-Class University Teaching and Research Over the Internet: Students’ Perspective on the Research and Learning Process. Presented at the World Conference on Educational Multimedia and Hypermedia, Boston, Mass. June 17-22, 1996. (This was primarily a student run session in which students in the collaborative project discussed their experiences.)
- AAHE National Conference on Higher Education, Washington, D.C. March 15
- EduCom ‘97 Minneapolis, MN October 28-31
- EduCom ‘98 Orlando, FL October 13-16
- EduCause ‘99 Los Angeles, CA October ‘99
- American Psychological Association Boston, Mass. July ‘99
- Syllabus ‘99 Santa Clara, CA July ‘99
- EPA Baltimore March ‘00

Plans to present on this topic:

- WEBNET San Antonio November ‘00

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- Clarion University Faculty Development Grant (2000-2001).
- West Chester University Faculty Instructional Technology Grant (2000-2001).