Supporting Online Group Projects[1]

Karen C. Williams[2], Bruce A. Cameron[3] and Kari Morgan[4]
University of Wyoming[5]
Laramie, WY

Abstract

Group work has been used to enhance student learning in online classrooms. It has been also found to create a sense of community, thereby contributing to increased learning and satisfaction. However, educators who work in online settings may struggle with how to effectively structure group projects to maximize the effectiveness of this teaching strategy. This paper focuses on specific teaching strategies the authors recommend to help facilitate successful group projects in online settings. These recommendations are based on the results of a research study conducted by the authors to explore "How do students define their roles and responsibilities in online group projects?" Results showed the difficulty students had with understanding how to make group projects work in an online setting and thus, specific strategies are recommended to support effective group work. These strategies include structured assignments to allow a climate of collaboration, use of preliminary assignments to help students understand group roles and styles, faculty and peer input into grade assignment for group projects, use of online tools to help gage group participation and determine additional intervention strategies when needed, and using a multi-stage process to help students solve problems that can arise during group work. Instructors need to be aware of the challenges specific to social task development and effectively use online platform tools, assignments and activities to scaffold and facilitate student learning and community building.

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Literature Review

Much of problem-based work is accomplished in group settings. This is particularly true in colleges of agriculture where faculty strive to model collaborative approaches in their USDA and other research projects. Undergraduate and graduate students who are fortunate enough to work with faculty members in research settings are often exposed to the importance of group approaches to solving complex, important problems. However, many students do not have or do not choose to avail themselves of such research opportunities. Consequently, it is unclear whether or not students value or understand group approaches in non-research settings: i.e. classrooms. Working in group settings may be further complicated in distance education environments. As online courses continue to grow through such groups as AG*IDEA (AG*IDEA, 2011), problem-based work in the form of online group projects will likely continue to grow as well.

Group projects and other group activities are important active learning strategies that contribute to a feeling of community and connectedness (Ouzts, 2006; Rovai, 2002). Social connectedness enhances student satisfaction and learning in face-to-face classes and online (Brett and Nagra, 2005; Dawson, 2006; Donaldson and Graham, 1999; Fisher et al., 2004-2005; Menchaca and Bekele, 2008; Slagter van Tryon and Bishop, 2009). Specific social tasks may also be important to the success of online groups. Hewson and Hughes (2005) identified five social tasks they felt were important to group formation: making oneself known, developing an identity within the group, getting to know others, discovering and contributing to the communication etiquette of the group, and developing supportive relationships within the group may also play a role in group formation. This article will share recommendations for educators based on the results of a research project that was conducted to answer the answer the question, "How do students define their roles and responsibilities in online group projects?"

Methods

This paper reports on the results of a research project that utilized quantitative and qualitative

[1]Support for this research was partially provided by the University of Wyoming Outreach School.
[2]Professor
[3]Associate Professor
[4]Associate Professor
[5]Department of Family & Consumer Sciences, 1000 E. University Ave., Dept. 3354

methodologies. Institutional review board (IRB) approval was solicited and received for the initial study in March 2007 and for the continuance in 2008. The study was classified as a survey procedure and as such was considered exempt both times.

The research team developed a survey based on items modified from Ouzts (2003), Rovai (2002), and Bonk and Wisher (2000). Additional items, were added by the researchers to further explore the community constructs and to create social task items based on the work of Hewson and Hughes (2005). The survey (Cameron et al., 2009) included open ended questions and was deployed to 127 students in six different online classes through a university-based survey tool with a 47% response rate. Both lower division and upper division courses were included, and all courses had online group projects as part of the course requirements. Students included freshmen through seniors. The age range of respondents was 19-62 years, with the average age at 29; 93% were female and Caucasian; 45% were on campus students taking online classes, and 55% were distance students. In addition, chat logs and discussion threads were downloaded from the class course shells.

Survey results were analyzed using SPSS with a focus on descriptive statistics. Student comments to the survey as well as chat logs and discussion threads related to the online group projects were coded for themes and issues. Multiple data sources and the use of multiple investigators provided triangulation (Lincoln and Guba, 1985). All three authors independently coded the results, then met to discuss the findings and collapse the codes (Garrison et al., 2006).

Results

Quantitative Results

Results revealed few significant relationships between each of the five social tasks and student perceptions of a sense of community. Students felt that social tasks were important for making oneself known (88%), discovering etiquette within the group (80%), developing supportive relationships within their online groups (75%), getting to know others (63%), and developing an identity within a group (59%). While these social tasks may play a role in the formation of online groups, they did not appear to be related to creating a sense of community. Instead, students' responses indicated that they focused more on completing the group task than on seeing projects as creating community in order to enhance learning (Cameron et al., 2009).

Qualitative Results

Four themes were identified: testing the waters, apologies as being nice, tag – you're it, and struggling to find one's role (Williams et al., 2011). Testing the waters is a method students use to check in with each other and to test their ideas prior to making commitments related to roles and processes. Apologies as "being nice" is a strategy that students employ to show concern for others and to avoid creating conflict or to preempt negative feedback or anger. "Tag-you're it" describes a process groups use to assign leaders by default. The first one who posts an idea is seen as the leader by the group, whether they had intended to take that role or not. Struggling to find one's role reflects processes used to discover, understand and clarify individual roles within a group without clearly stating or defining specific roles.

Students created roles as they went through the process of working on their group projects. Six roles emerged:

•Leader – facilitates the work of the group and keeps the group on task,

•Spoiler – participates very infrequently, tries to change the direction of the group, then fades out again,

•Coat-tails – tries to act like a participant, but does no work,

•Wannabe – tries to control the group without taking responsibility when there is already a leader,

•Agreeable enabler – goes along with all suggestions, even when tasks shift because leadership is problematic, and continues to do the work, and

•Supportive worker – understands assignment criteria and group dynamics, follows through, and takes initiative to ensure group success, but is not the group leader.

Not all of the roles above help develop the social tasks identified by Hewson and Hughes (2005) as important to group formation, nor do they contribute to the success of the group from a process, product or learning standpoint. What then can instructors do to help support students in their understanding of group roles, essential social tasks, and the importance of group projects to their future success?

Implications

Group work is often used in face to face classes to enable students to successfully work in teams, preparing them for the world of work. However, faculty may be hesitant to use this pedagogical technique in online settings. Our study has shown that students may view social tasks and the creation of a sense of community as superfluous, not realizing that they are the foundation

of successful groups. In addition, they may not be aware that the strategies they use to create roles and approach tasks are not optimal for learning. There is an argument that students may know successful strategies that they can employ when approaching online group projects or automatically transfer skills from face to face class experiences to the online setting. In addition, online classes frequently have a greater age span than face to face classes. Faculty members and students need to be aware that different generations have different learning styles and values that impact roles and approaches to social tasks. For example, any online class could include Boomers (1946-1964) who tend to be team and process oriented, Generation Xers (1965-1982) who are characterized as being self-reliant and not fond of rules, and Millenials (1982-present) who value the openness of online classes but often prefer anonymity to closeness. (Oblinger and Oblinger, 2005; Skiba and Barton, 2006; Windham, 2005).

Recommendations for Practice

Faculty members can use specific techniques to support effective small group dynamics and group formation, and make processes more visible to students. The approaches suggested below have the potential to enhance the online group experience for students and faculty alike.

• **Structure the task so it allows a climate of collaboration and true engagement by the students (Illera, 2001).** If the students perceive the task/product as just one more thing they have to do for the teacher rather than something that they help design or as an authentic assessment experience with a real audience for their work, they will not take the group assignment seriously. The assignment must be meaningful.

• **Create a preliminary assignment to help students understand group roles and styles well before they begin a group task.** Such a strategy would fit into the best practices for online learning, presenting stimulus materials, suggested by Hirumi (2002).

• **Decide whether or not to assign roles.** Assigning roles is frequently used as part of the cooperative learning strategy developed by Johnson and Johnson (1979) for small group tasks. They expanded this notion, adding the use of cooperative learning and technology in the college classroom (Johnson et al., 2006). Instructors should decide whether students will create roles as they go through the group assignment process, or whether the students will be assigned roles (De Weaver et al., 2008; Schellens et al., 2005; Zhu and Alkins, 2009). Both strategies have merit, and the faculty member may want to alternate between the two or only use one.

• **Make participation by group members visible.** Many instructors worry about grading for group projects and being able to tell whether or not students participated equally. One strategy to make participation visible is to use planning threads in a unit that stay open for the duration of the project. The thread becomes an area where students communicate with each other about all aspects of their project. The faculty member can see how often each student posts, what their contributions are, whether the students are talking through all aspects of their project including problem resolution, and answer any direct questions posed. Another similar mechanism is for the instructor to create chat rooms for each group. Each chat session produces a chat log that the instructor can read (in this case in real time rather than asynchronously) while giving the group members another means of communication.

• **Use an online document sharing area or wiki outside of the course shell so that the faculty member and students can share documents for handouts, presentation materials, and drafts of their projects.** This makes participation and roles visible to the instructor. It can also help students develop trust in one another because they can see the materials posted, the date when each item is posted, and make comments on or changes to documents for all group members to see.

• **Provide a mechanism to individualize grades.** Faculty members may be concerned about giving all the students in a group project the same grade. We feel that should not be the goal in online group projects. One way to help students understand the consequences of being a spoiler or coat-tails is to establish a grading process whereby students evaluate their group members, and faculty members use participation as a component of the group project grade. One example (used by

Table 1: Sample Individual Student Scoring Rubric for a Group Project

Grading Rubric: Children's Rights Project (50 points)	
	All ten principles of the UN Declaration of Children's Rights are illustrated. Examples used clearly illustrate the principles. Links are included to enhance written material on web page. (10 points)
	Group project shows depth of understanding of subject matter. Material included clearly shows why each principle is important, and why the "village" chose to make it a priority. (20 points)
	Group ideas are communicated clearly and effectively. Web page has appropriate graphics, working links, and professionally communicated information. (10 points)
	Group project shows coordination and communication as a unit. Planning threads and chats show evidence of what each member did to equally contribute to the project. (10 points)

students to rate each group member and by the instructor) can be seen in the grading rubric in Table 1 used by the lead author in her Multicultural Influences on Children and Families course. Using this method means that all students in the group will not necessarily receive the same grade.

Another option is to use a more specific student feedback form as shown in Table 2. Students rate each other on a number of criteria using a five point Likert scale where a rating of one indicates below expectations, poor or infrequent and a rating of five indicates above expectations, very well, or all of the time for participation. After completing the rubric, students are required to provide written comments justifying their scoring of themselves as well as their group members.

Table 2: Sample Student Peer Evaluation Rubric

GROUP MEMBER RATING FORM						
			Group Members #s			
	EVALUATION CRITERIA	Self	#2	#3	#4	
1.	Frequency of group meeting attendance or outside communication					
2.	Comes to group meetings prepared for tasks					
3.	Completes assigned tasks on a timely basis					
4.	Is willing to assume fair share of work					
5.	Performs a meaningful role in the group					
6.	Exhibits a positive attitude					
7.	Works compatibly with members of the group					
8.	Shows sensitivity to others' feelings and opinions					
9.	Willingness and ability to resolve conflicts					
10.	Encourages others to participate in creative ways					
11.	Overall quality of work					
12.	Overall contribution to the team					

• **Post a guide for successful group processes.** As our research has shown (Williams et al., 2011) negative roles can frequently emerge within groups. Poor experiences frequently make students and faculty members dread group work. We recommend posting the following guide to successful group projects that ends with a multi-stage process whereby students know steps to take to resolve issues:

• **Define the goal of the project clearly.** What needs to be achieved? When it is a class project, this should be clearly spelled out in the project description and/or grading rubric. If something isn't clear, get it clarified with the instructor right away before you proceed to step two!

• **Define the essential tasks.** What tasks need to be done to bring the project to a successful completion? Define these and make the list together, and do it before you start deciding who does what. It's important to have a roadmap that you all agree with before beginning. Put these in writing so everyone has the same information at the same time.

• **Identify each participant's role.** Who is going to be responsible for what? Use each other's strengths to the best advantage as any successful team does. Ask yourselves: Do we need a team leader who'll keep things and individuals on task? Do we need a recorder? A researcher or more than one? Someone good at graphics? Think broadly and be sure the roles fit the essential tasks you have identified, and that each person is making an equal, important contribution. Add these to the written essential tasks and be sure all group members have them.

• **Set a realistic timeline that allows the project to be done in time (and with time to fix, redo, or create drafts that the group reviews).** Create the timeline so that everyone knows when their task must be completed, when the group is going to meet, when the feedback needs to be given, and when the finished project needs to be submitted. Put it in writing.

• **Create a written record after every group meeting.** For an online class, specify how (email, chat room, threaded discussion, phone call). For a face-to-face class, specify where and when. Doing so insures that everyone has a record of what was done, what still needs to be done, what each group member is responsible for at the next meeting, and when the next meeting will take place. If there is a problem with a group member, it also provides a written record in case someone says they didn't know what their task was, etc.

• **Agree that if a problem develops, it will be solved in a respectful manner.** Don't allow problems to become personal. Focus on problems, not people. Keep the project goal in mind. Celebrate successes and contributions of each member.

• **Use the following "Divorce Procedures" if they become necessary.** But just as in real life, view the "divorce" as a last resort. It is not intended as an easy out! Our department came up with a protocol that should be used. We don't feel that it's right when there is a group grade for everyone not to participate equally. So here are the "Divorce Papers" for an online class:

1. If someone isn't participating, they need to be called on it by the other members. Try to find out why. Get the person's help to solve the problem.

2. If this persists, call a chat group meeting and invite the instructor to mediate. He or she will try to help get things back on track.

3. If the problem is still not going away, the group needs to notify the instructor that they are "divorcing" the person. When that occurs (and it should only be used as a last resort) the person must complete the project alone and be graded separately.

• **Encourage group presentations.** Many online course platforms and web conferencing software, such as Illuminate, make the presentation of group projects possible. This helps make assessment more authentic, since classmates, the instructor, and invited guests can attend the presentation session. For example, in the eCollege platform that we use, there is a Class Live function where attendees can use headsets with microphones to ask questions or can use an area to type comments and questions, and the presenters can use headsets and have the use of a white board where they can display PowerPoint slides while they orally go through the presentation.

Summary

Online group projects can be an effective teaching and learning tool. As our research and suggested teaching strategies show, students can learn successful strategies for group participation that will serve them well in their online and face-to-face courses while preparing them for the world of work. When students are not supported by their instructors, they can develop maladaptive skills that hurt the group project process and potentially cause feelings of dread or avoidance when they are put into group situations. Instead, instructors should apply best practices gleaned from current literature on pedagogy, technology, and adult learning to online group projects.

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