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Designing Effective Group Projects: Applying Student Feedback to Project Design

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By integrating group projects into the curriculum, educators can seize the opportunity to provide students not only with marketable skills, but the chance to deepening their understanding of a given topic or subject matter by learning from one another. Designing an effective group project, however, is a challenging task. In the current paper, I utilize results from a student survey on characteristics of effective groups to design an applied group project and describe six key lessons learned by incorporating student feedback into group project design.

Keywords: Group projects, group learning, student perceptions, student feedback

As the use of teams in the workplace continues to increase in importance, organizations are relying more and more on business schools to provide students with the opportunity to develop and practice necessary teamwork skills (Hansen, 2006). At the same time, educational and pedagogical researchers and practitioners are highlighting the value of collaborative learning as a hallmark of the increasingly popular learner-centered teaching philosophy (Weimer, 2002). By incorporating group projects into the curriculum, educators can thus seize the opportunity to provide students not only with marketable skills, but the chance to deepening their understanding of a given topic or subject matter by learning from one another. Designing an effective group project, however, is a challenging task; and as many instructors can attest, not all team-based assignments succeed.

As a college professor, I have experimented with group projects on multiple occasions and had been, at best, only moderately successful. Curious as to how I could improve the process, I turned to my students to find out what elements of group projects facilitate or hinder their success. I asked 71 students across three sections of an upper level management course to think about their past experiences in group projects and identify the characteristics of both their best and worst experiences in group projects. Their answers are summarized in Table 1.

In Spring, 2012, I led a course on Performance Management, where I saw the opportunity for a well-designed group project to genuinely benefit my students, and decided to try again. The purpose of the project was to allow students to apply course concepts in a "real world" setting by working with an actual client organization to identify performance management needs and develop relevant, practical, and theoretically sound solutions. In designing the project, I relied heavily on data provided through my student survey. Below, I identify some of the lessons learned in the development and execution of this project.

Lesson 1: Structure the Course to Facilitate Project Success

Perhaps the most common complaint from the students surveyed was that not enough in-class time was given for teams to meet with each other or the instructor to work on the project. At my particular institution, a commuter school where the majority of students have jobs, families and myriad other priorities, finding a schedule that accommodates all group members is quite a challenge. I therefore structured the course to alleviate this concern. This particular group project was comprehensive in nature and had the potential to be quite time consuming. Thus, I devoted the first 9 weeks of the semester to intense content coverage with the remaining 7 weeks designated exclusively for the application of knowledge in the group project, with the classroom designated as a meeting space. I attended all scheduled class sessions to serve as a resource and check in with the groups. Groups were not required to attend the sessions (e.g., if they wanted to use that time for library research, meetings with the client, or off site meetings), but were strongly encouraged to do so.

From my own observation as well as through feedback from students at the end of the project, the course design may have been the factor critical to project success for three key reasons. First, groups had a guaranteed meeting time. Second, key course concepts had already been introduced and practiced during the first half of the semester, so students had a more complete and holistic understanding of the elements to be considered as they worked on the project (versus working on the project in a piecemeal fashion). Finally, I was able to observe the groups in action, making me better able to provide coaching, clarify concepts, and give feedback.

Lesson 2: Consider Group Size

Existing research on group effectiveness does not specify an "ideal" group size for group projects (Deeter-Schmelz, Kennedy, & Ramsey, 2002). Nevertheless, group size was perhaps the second most frequently cited factor contributing to both success and failure of group projects among students surveyed, with a group size of 2-4 considered to be most favorable. Smaller groups, according to the students, were easier to manage, had fewer conflicts, and were more cohesive. Thus, I limited the group size to 4 members unless the members explicitly requested a larger size (none of the groups did so).

Lesson 3: Facilitate Team Member Selection

Although the students I surveyed expressed a preference for selecting their own team members, they also wanted the instructor to facilitate team formation by matching members according to schedules, work ethic/preference, and interests. To meet these somewhat conflicting desires in the current project, I asked the students during the first week of the semester how much guidance they wanted from me in selecting the teams. Overwhelmingly, the response was to self-select. To facilitate the process, I presented them with a questionnaire I had prepared asking about their client preference, schedule, and work style/ethic they could use to help find the best fit with a potential team and gave them a deadline by which teams were to be formed. Although I was ready to assist students in finalizing their groups, all teams were finalized by the deadline.

Lesson 4: Facilitate Group Member Cohesion

Teams were selected at the end of the third week of class. Although this did not give the students a significant amount of time to get to know each other before the teams were formed (cited in the student survey as helpful to project success), I structured the course such that the project teams worked together on in-class exercises during the first half of the semester (before work on the group project began). By the time the group project began, then, team members knew each other and their working style relatively well.

Lesson 5: Establish Group Member Accountabilities

As the time neared to begin the group project, I had each group create a team contract. The purpose of creating the contract was to get group members to discuss, clarify, and agree upon roles, standards, and expectations. The final contract designated the team leader/primary point of contact for the team and outlined factors such as how tasks would be distributed among members, expectations for team member communication (e.g., media to be used, expected time to respond to emails or voicemails), and standards of behavior and performance. Because free-riding was a common complaint among team members, I also had each group identify how it would handle poor performance among members and specify a "kickout clause" documenting the steps the group would take if a member needed to be terminated from the project.

Peer evaluations were cited in the student survey as beneficial to project success. Thus, I also had the groups design peer evaluations for the project. Each group identified the core competencies that would be included on the peer evaluation (such as participation, quality of work, etc.) and develop a tool that captured each member's performance with respect to those competencies in both quantitative (i.e., numerical rating) and narrative (i.e., justification for the rating) form.

Lesson 6: Provide Structured Freedom

Proponents of learner-centered teaching argue that the potential for learning increases when students are given the opportunity to explore concepts and solve problems rather than having an instructor tell them what to do (Weimer, 2002), and freedom of choice emerged as a common theme in the student survey. Thus, I designed the group project in a manner that provided sufficient structure, yet allowed the students substantial control. For example, I laid out basic expectations that they were to meet (such as weekly progress reports and key project milestones) and provided students with a rubric outlining how I would be evaluating their performance (a combination of their individual/collective effort/behavior and the quality of their outputs/results), but allowed them full control over the direction in which they chose to serve their client organizations.

I described my role to them as a "consultant" and encouraged groups to come to me frequently with their ideas and drafts so I could provide feedback and guidance along the way. Thus, although there was no structured lecture or content presented during the group project phase of the semester, I was able to ensure that each group, by receiving tailored feedback based on theoretical principles introduced in the course, continued to learn. Those groups who used me in this consulting capacity reported that they felt I served as a coach vs. an evaluator, believing they had the freedom to make mistakes, get feedback, and try again.

Summary and Conclusion

Overall, the project was a success – 6 of 7 groups met or exceeded the grading criteria outlined for the project, and the client organizations indicated that the work performed addressed their needs. Further, many students reported that it had been one of the most useful group projects that they had participated in to date. Of course, the project was not entirely perfect - there were obstacles along the way, including difficulties with the client, non-participating students, and groups that did not take full advantage of the time and resources provided, but overall, most parties benefitted from the experience.

Group projects will remain an important part of business education and learner-centered teaching. By turning to the learners themselves in their design, we may be even better able to identify and incorporate factors that truly facilitate learning and ensure these projects succeed.

Table 1. *Student Stated Characteristics of Best and Worst Group Project Experiences*

Characteristics of Best Group Project Experience	Characteristics of Worst Group Project Experience
Time given in class to work on project*	Too much meeting outside of class, no time given in class to work on project or talk with team members*
Smaller groups – 2-4 people*	Large groups – more than 3-4 people*
Anonymous/confidential peer evaluations were collected from team members*	"Slacker" team members who didn't care, had lower standards, or were lazy*
Clearly defined standards and expectations of group members*	Conflicting team member schedules*
Clearly defined expectations of professor*	Poor communication within team*
Project was easily divisible among team members*	Personality conflicts within the group*
All team members participated*	Unequal contributions by group members (e.g., one or more dominated or failed to participate)*
Students had freedom to choose own team members	No structure given from professor*
Professor matched team members on work style/ethic	Project was too large/teams had too much to do
Students had freedom to choose own topics	Arbitrary assignment to teams
Teams were formed after students had a chance to get to know each other	Graded on final outcome vs. participation and effort of team members
Professor was open to hearing about difficulties with group members	No feedback given to team members by others (e.g., nonperformers were not confronted)
Good communication within team	Lack of respect within the team
Team had to "check in" with professor on a regular basis	Entire project was due at once (vs. separate parts throughout semester)
Team kept a log of each individual's contributions	Teams communicated exclusively through email
Frequent team meetings	Professor gave little support
Designated team leader	
Shared, agreed upon goals within team	
Project was divided into multiple deadlines/chunks	
Professor offered guidance throughout project	
Resources were made available	

*Frequently mentioned responses

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