PROJECT MANAGEMENT TOOLS
THAT FACILITATE TEAM PROJECTS

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Abstract

The ability to work well on a team is one of the most important skills sought by companies and graduate schools. Yet, for many business students and professionals, working on teams is a frustrating and perilous experience, either because the project itself is not an appropriate “team” project or because the team members are ill-equipped to “manage” the team process. However, by identifying key elements of a team project that need to be managed, designating specific functions that each member must perform, and using specific project management tools, the team process becomes viable for all concerned parties. Accordingly, educators and managers could easily incorporate the use of project management tools into the specifications of projects, and integrate specific methodologies into courses to guarantee the effective use of such tools.

KEY WORDS: Team tasks and projects, communication skills, project management, managing team processes, project management tools, team projects

INTRODUCTION

In academic and professional settings, the “team approach” has become the usual means of pursuing educational and organizational objectives. Students, for example, could have at least one team project per course, and some might have several. And, for business professionals, working on teams has become a normal activity. Porter & McKibbin [1988], National Academy of Sciences, National Academy of Engineering, & Institute of Medicine [1995], and American Council on Education [1977] describe in great detail the necessity of including teamwork in educational programs, and make specific recommendations to accomplish this goal.

Petersen & Hillkirk [1991] describe the importance of teamwork in corporate settings, and include several real-life examples of how “real” teams contribute to overall profitability. And Hubbard [2002 & 1999] shows the overwhelming influence team projects have for educational and employment purposes, especially in international settings.

Yet, without fail, working on teams for many students and professionals is a frustrating and perilous experience. Possible reasons include the inappropriateness of the project itself as a “team” project. Katzenbach & Smith [1993] and Young & Henquinet [2000] distinguish between “team” and “group” projects and posit a framework for such projects. And, Hubbard [2003] concludes that by knowing the specific skills that facilitate the team process (i.e., reading and responding to behavioral clues, decision-making, consensus-building, problem-solving, and conflict resolution), team members can have more successful team experiences.

However, because it can be difficult for some to translate concepts and skills into practical applications, specific project management tools can be very useful in facilitating the team process.
THE STUDY

To see how effective such tools are, and find ways to incorporate them into team projects, a study (referenced herein as “the Study”) was conducted during spring semester 2004. The Study is based on the results of the experience of undergraduate business students at a southern California university who worked on teams to complete a course project which focused on building teamwork skills while increasing knowledge of international business in a “real” situation.

The main purpose of the Study was to get student’s perceptions and ideas about teamwork and team projects, specifically to identify:

- Instructions usually given by professors about working on teams;
- Methodologies that build teamwork skills; and,
- Tools that enable students to successfully “manage” the team process.

The students were comprised of 70 undergraduate business students, 64% of which were seniors and the rest (36%) were second semester juniors. Males and females were equally represented, and the vast majority (91%) were Americans.

METHODOLOGY

The Study was conducted in three parts: 1) students completed an initial questionnaire, 2) the professor lecturing on teamwork concepts and providing experiential and teamwork activities, and 3) students completed a follow-up questionnaire. The students completed the Initial Questionnaire to determine their previous experiences with team projects, specifically to identify the types of instructions about teamwork that had been given to them in previous classes. The results of this questionnaire were used as a baseline for a comparison with the results of the Follow-up Questionnaire.

The professor did the following to introduce specific teamwork concepts and project management tools:

1. Gave a lecture on the five stages of team development and the skills that facilitate successful team projects.
2. Provided an opportunity for students to participate in an experiential learning activity, the main objective of which was to identify practical applications for organizational communication theories, specifically teamwork.
3. Conducted in-class team-building activities to focus on interpersonal communication skills and reinforce team process concepts.
4. Gave instructions about how to use specific project management tools, and evaluated on how effectively they used those tools. The main tools that were used were the Agendas, Team Information Sheet, Team Performance Contract (referenced herein as “the Contract”), Project Management Plan, and Team Member Evaluation developed by DuFrene & Lehman [2002].
5. Conducted team conferences and follow-up sessions depending upon the progress of the teams or as requested by students.

Finally, the students completed the Follow-up Questionnaire after the culmination of the course project to determine the effectiveness of specific project management tools and the lecture, activities, and conferences at facilitating positive teamwork experiences.

FINDINGS

The Initial Questionnaire revealed that prior to the Study, 57% had participated in an average of five team projects, 22% had participated in an average of 12, and 21% had participated in more than twenty. In 61% of the time, team members selected each other (as opposed to the professor assigning the team members), 83% had approximately 3-4 members on each team, and 86% of the projects were assigned by the professor.

When asked about the types of instructions given on how the team members should work together, 59% said that they had not been given any instructions at all, and the rest (41%) had been given some instructions (e.g., how to assign tasks, how often to meet, due dates, number of teammates), and these instructions were usually included in the assignment. If instructions about teamwork were not given, in
86% of the cases the teammates made a group decision about such matters, and in 14% of the time, one person took charge as the leader.

Concerning the types of instructions given about how to handle slackers, 52% were told to seek assistance from the professor, have conferences with the offender, or hand it with peer evaluations, and 17% could ask non-contributors to leave the project. However, 15% were not given any instruction at all about how to handle slackers.

When asked to identify the problems with team members in previous team projects, 53% said that the unequal contribution of slackers was the biggest problem. 32% had communication problems (not listening to or agreeing with an idea, language problems, and interpersonal problems), and 15% had scheduling problems.

The way they valued their previous team experiences was mixed. 26% found them to be “valuable” (overall positive with an emotional response), 31% found them to be “OK” (neither positive nor negative) or “not valuable (overall negative with an emotional response), and 43% understood the “importance” of team projects, but did not find them satisfying.

Concerning changes that should be made to improve future team projects, 23% said that no changes are necessary, 20% said that the professor should give them the ability to choose teammates and provide training on team skills, 33% said that the students should spend more time on the project, manage that time better, set rules and roles at the beginning of project and hold member accountable, and 24% listed other suggestions (e.g., starting earlier, not teaming up with friends).

The Follow-up Questionnaire was equally effective at identifying student perceptions about team projects. When asked about the types of instructions given on how the team members should work together, 81% acknowledged that they had received “some” instructions (which were either included in the assignment or specific handouts about teamwork, or discussed during lectures and conferences), 8% said “none”, and 11% said “a lot”.

When identifying the types of instructions given about slackers, 100% said that such instructions had been given: 38% said that such instructions were included in the Contract, 18% said that they had been told to seek assistance from the professor or that it would be handled with peer evaluation, and 18% mentioned they could ask non-contributors to leave the project.

And, concerning the issue of slackers, 96% said that they had not had any or that the Contract had fully prepared them for such a situation if it occurred.

When asked how they valued the team experience in this particular class, 96% found it to be “valuable” (overall positive with an emotional response). And, when asked what changes should be made to improve future team projects, 83% found none, 7% said that the professor should select teammates or assign roles, including assign a supervisor / facilitator of the team, and 10% said the team members should make sure the meetings are more structured and that the assignment is clear.

DISCUSSION

From the above, it can be noted that there is a distinct benefit to explicitly teaching teamwork skills. Specifically, more students (81%) acknowledged that they were given instructions on how to function as a team, 100% knew how to handle slackers, 96% did not have any problems with this team project, 96% found it to be valuable, and 83% thought that this type of team project (one in which teamwork skills were specifically taught) did not need any improvement.

However, there are four areas that require elaboration. Although there was a significant amount of lectures, in-class activities, experiential activities, and conferences on the subject of teamwork and how teams should function, it is surprising that 8% said that they had not received any instruction on this matter and 81% said that they had received “some”. With the amount of time and attention placed on this issue, it would be expected a greater number of students should have acknowledge that they had received “a lot” of instruction. This might indicate that students may have difficulty in the connection between lectures/class activities and the application of the concepts discussed. Therefore, more attention might need to be devoted to making sure this connection is grasped.

It is also interesting that only 38% identified that the Contract was the way in which they had received instructions about slackers, especially so much attention had been placed on the Contract and how it is an effective way to define acceptable and unacceptable behavior. It appears that having discussions on the subject and having students write a contract is not enough. Perhaps, an additional
step should include a handout similar to the one used by Robyn Walker, PhD (Associate Professor, Marshall School of Business, USC) that includes a "Rationale for Group Contract", "Instructions for Writing the Group Contract", and "Role Assignments" for each team member [Walker 2004]. This way, students will have more input about the rationale and use of this tool.

Although none of the students mentioned any particular problems with slackers in the Follow-up Questionnaire, this issue is one that deserves special attention, and in this particular case, it is necessary to make some speculations about why this "problem" did not occur. It is hard to believe that there would not be any slackers within a group of 70 students. This could indicate that the project management tools designed to address this problem are, in deed, effective at preventing such problems. With attention drawn to this problem in advance, any potential slackers might have been discouraged from slacking. Also, by allowing teams to “fire” a teammate or have some impact on their individual grade (through peer evaluations), fully contributing team members might have felt empowered to make sure that they did not let slackers get away with inappropriate behavior.

Concerning the issue of firing, Sandra Chrystal, PhD (Associate Professor, Marshall School of Business, USC) provides a very straight-forward procedure – the team must meet with the offender face-to-face and present a memo that details the reason for firing. The "fired" member then has to complete the project individually.

Peer evaluations are also effective at enlisting the best behavior from teammates, and can be useful when grading team projects. In addition to the criteria identified on the Team Member Evaluation Form [DuFrene & Lehman, 2002], other criteria can be found in Paswan & Gollakota [2004] who developed a multi-item, multidimensional scale for peer evaluation encompassing five key dimensions: dependability, task and maintenance orientation, domineering behavior, free-riding behavior (slacking), and individual competence.

**PRACTICAL APPLICATION OF FINDINGS**

With the information gained from the Study, it is possible to make improvements to the way team projects are designed and taught, and possibly find ways to incorporate the explicit teaching of teamwork skills into existing curricula. For example, it would be ideal if a specific course in Management Communication or Organizational Behavior could focus predominantly on teamwork and use it as a kind of case study for teaching subject matter related to the designated course. In other words, a Management Communication course could have a major course project that must be completed in teams and use this context to teach the main concepts in Management Communication. Likewise, an Organizational Behavior course could do the same and use the context to teach the main concepts in Organizational Behavior. And, in business schools that have two separate departments for these fields, both courses could be coordinated to reinforce this valuable skill.

However the explicit teaching of teamwork skills is incorporated into a curriculum, it is essential to focus on the following four areas:

1. The rationale for groups / teams and how they function
2. The skills that facilitate successful team interactions
3. The project management tools that facilitate effective teams and how to use them
4. The transfer of an academic experience to the workplace

A good methodology that leads students through this process can be found in Howard [2004], who also provides a number of project management tools that students will find useful.

**FOLLOW-UP STUDIES**

Although the students involved in the Study included a significant number of transfer students, in order to know the degree to which the Study is truly representative of undergraduates as a whole, it needs to be replicated with as broad a base of students as possible.

Furthermore, because gender-specific or culture-specific factors were not addressed, it might be prudent to look specifically at any differences in teamwork between males and females or people from other countries to see if any additional factors should be considered.
SUMMARY AND CONCLUSIONS

From a heuristic perspective, the creative, social, and personal growth that could occur while working on teams is significant and proven as one of the most available goals in educational settings. Educators, however, can enhance this growth by being aware of the concerns that students have when dealing with the team process, identifying learning objectives that address those concerns, and using methodologies that equip students with tools that engender successful team, group, or collaborative endeavors.

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