

## FORMING TEAMS FOR CLASSROOM PROJECTS

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### ABSTRACT

*While much is known about benchmarks of success for teams and the need for diverse skills and abilities within teams, little research has been done to proactively identify a focused strategy for team formation that will help to ensure high performance and group efficacy. This paper applied what is understood from the groups and teams research literature regarding the characteristics of high-performing and effective teams to the assembly of teams in the business classroom. The authors describe a focused, experiential activity that can be used to help students form teams based on predetermined skills and abilities considered relevant to the assigned group project. This activity may also be useful when forming teams within longer-term teams within a cohort of students enrolled in a degree program, and also within organizations.*

**KEYWORDS:** *Groups, Teams, Group Formation, Group Selection, Assigning Students to Teams*

“simulated” in the classroom. First, the simulated teams of the business classroom environment are generally not assembled in ways that replicate the “real world.” This distinction is relevant because the way that teams are assembled in the classroom can have important implications on the way team members interact and the level of success the team experiences in their assigned work. On the other hand, surprisingly little research has been conducted to provide evidence that the group formation methods typically used in the business world are consistently effective in terms of enhancing overall team performance and achievement of project outcomes. After a brief summary of common approaches to forming classroom teams for group assignments, this paper considers the groups and teams research literature for advice on the “ideal” group formation process. Then, a group formation process that can be used by classroom instructors to form project teams is described. Facilitator guidelines and additional considerations are included in this description.

### INTRODUCTION

Teamwork, team projects, and team structures are prevalent in the workplace, and it seems logical that business schools would want undergraduate as well as M.B.A. students to learn about and participate in team projects in the academic classroom. This expectation is reflected in the “Student-Faculty Interaction Principles” of Association to Advance Collegiate Schools of Business (A.A.C.S.B. Eligibility Procedures and Accreditation Standards, January 2006). Although A.A.C.S.B. does not require the creation of student teams per se, A.A.C.S.B. discourages a lecture-only teaching format and instead expects that business school curricula at all levels will encourage cooperation, collaboration, and exposure to diverse viewpoints. One of the most common ways to design learning experiences in which students are able to share knowledge and experience with other students is through the construction of student teams and the assignment of group projects.

There are important differences, however, between teams constructed within organizations and teams that are

### COMMON APPROACHES TO GROUP FORMATION

In order to understand the importance of the ways students are assigned to teams in the classroom, it is useful to consider how individuals are assigned to teams in the workplace. In organizations, individual employees are almost never randomly assigned to teams. Teams are more often formed by managers who assign employees to teams on the basis of time availability (e.g., an employee whose project assignment time has not been fully scheduled maybe assigned to a newly forming team for a project), past team performance (e.g., for high-profile assignments, a manager may assign individuals who have a proven track record for performance on teams), and skills sets or competencies (e.g., certain team assignments may require a specific type of background or expertise, and a manager may ensure that such skill sets are represented on the team). Occasionally, a manager may seek out individuals who express interest in a specific team or a specific type of assignment. Although specific individuals may seek out certain teams or team assignments, it is generally not the norm to form entire

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teams on a volunteer basis. It may also be possible for individuals to occasionally “opt out” of membership on certain teams. This decision may be based on personal preferences or even “incompatibility” reasons, but the “opt out” option cannot be used very often, lest an individual be labeled “not a team player.” In summary, neither random assignment nor self-selection in to project teams or work groups is the norm in the workplace. Overall, the methods for forming teams in business organizations tend to emphasize staffing efficiency and skill sets, and generally do not anticipate the potential relationship between the group formation method and the performance outcomes obtained.

In business and management classrooms, students are often assembled into teams in order to complete a team assignment. As we have learned, there are various approaches to forming teams adopted by instructors and students. One of the most common methods for creating teams in the classroom is random assignment. Random assignment of teams can be implemented by “counting off” or by random selection from the class roster. Another popular approach to forming teams is nonrandom, informal assignment based upon the choices of students themselves. For example, students might form teams based upon friendships and social preferences, based upon relationships formed in previous classes with certain other students, based upon “convenience” in terms of seating proximity in a classroom, and/or based upon individuals’ estimates of how specific other students in the class can help them get a good grade on the team assignment. Another familiar approach to team formation may be based on project topic or expertise in a particular subject. In this manner, students within the same profession or expertise choose to be on the same team to address the topic for which they have special expertise or interest. Finally, a few other methods to assigning students to teams have been presented in the pedagogical and groups and teams educational research literatures (e.g., Butterfield & Pendegraft, 1996; Nelson, Bass, & Vance, 1994).

### RESEARCH ON GROUP FORMATION PROCESSES

The choice of how to form teams in a classroom has not received much research attention. What difference does it make whether random assignment or some other method is used to form teams for a classroom assignment? One reason why group formation methods warrant some consideration is because the apparent disconnect between teams in the “real world” and teams in the classroom may call into question the whole rationale for requiring team assignments in the first place. An “unrealistic” method used to form teams in the classroom may debilitate the potential that a team assignment has to teach students something about teams that will prepare them for the business world.

Another reason why group formation methods may matter is that some methods may be inherently better than others in terms of the classroom outcomes achieved.

Outcomes associated with teamwork include not only grades on a team assignment, but also things such as students’ satisfaction with their particular teams and attitudes toward teams in general. Although it is generally assumed that classroom team assignments do not fully simulate workplace team assignments, it would be unfortunate if classroom team assignments tainted students’ opinions and attitudes about working within team structures, both in the classroom and in the business environment.

The method used to form teams in a classroom may have important implications for the outcomes associated with team assignments. For example, in a recent study by Chapman, Meuter, Toy, and Wright (2006), students who were randomly assigned to teams were less satisfied with their teams than those who self-selected into class groups. Outcomes such as pride in work performed and the desire to work in groups again were significantly higher in self-selected groups than in randomly assigned student groups. In another study, students who participated in a gaming activity developed to encourage self-disclosure and information sharing prior to choosing teams were more satisfied with the selection process and with the class project overall than were students assigned either randomly or by self-selection methods that did not incorporate the relationship-building game (Butterfield & Pendegraft, 1996). Undergraduate business students in this study also suggested that their groups were more effective than they would have been if their teams were randomly assigned.

It is imperative to select a group formation method that has the potential to make a difference in the way team members relate to each other in order to achieve positive outcomes. As noted by McClough and Rogelberg (2003), most major theoretical models of team performance emphasize the role of team member characteristics such as expertise, personality attributes, abilities, and prior experience regarding teams. Although little research offers specific guidance for assembling teams, the vast groups and teams research literature offers some compelling descriptions of effective or high performing teams. A group formation method designed to generate or facilitate the specific features of such teams may have important educational advantages over other methods used to assign students to classroom teams.

How should teams be comprised? Barrick, Stewart, Neubart, and Mount (1998) found support for their hypotheses that work teams with higher mean levels of individual extraversion, general mental ability, and conscientiousness are likely to receive higher supervisor ratings of performance. However, these relatively stable individual characteristics may not be evenly distributed in a given class of students, especially in courses with smaller class sizes, and it may not be feasible or convenient for instructors to measure such characteristics prior to assigning students to teams at the beginning of each term.

Another general assumption about team composition is that teams should be “diverse.” The diversity literature related to teams has shown mixed results, however, in terms

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of the benefits and performance of diverse teams. For example, according to Van der Vegt & Bunderson (2005), you probably shouldn't expect high performance results just from assembling diverse teams. Diverse teams must interact effectively to engage in team learning in order to achieve performance outcomes. An instructor would want all groups within a class to perform together well, and effective interaction and group dynamics should translate into good grades on the team assignment and hopefully student satisfaction with teams.

In addition to diverse individual characteristics that may contribute to the outcomes achieved by a team, group-efficacy has been identified as an important motivational mechanism involved in team behaviors and performance. With its basis in Bandura's (1977) social learning theory, the concept of self-efficacy refers to the expectations of capability or belief that a person will succeed at a task. The groups and teams literature has expanded the application of this concept to the group level of analysis (c.f., Gibson, Randel, & Early, 2000). It seems that individual team members who believe in the capacity of their groups to accomplish its goals and succeed at its tasks or assignments are more likely to behave in ways that contribute to the team's success.

Overall, the groups and teams research literature does offer some clear suggestions about what a group formation method ought to generate or reinforce when students are assembled into teams. Teams with higher levels of group potency (which can be considered group-level self-efficacy beliefs), task interdependence, and outcome interdependence tend to be more effective (Shea & Guzzo, 1987). Similarly, Campion, Papper, & Medsker (1996) suggested that teams incorporate the following in order to be productive and generate higher levels of team member satisfaction:

1. Process characteristics: autonomy or self-management, wide participation in team decisions, all team members have chance to perform a variety of team tasks.
2. Task interdependence and goal (or outcome) interdependence.
3. A supportive context: adequate training of both technical and team skills and adequate managerial support (resources, information, encouragement).
4. Positive team processes: Potency (team self-efficacy), fair share of workload, communication, cooperation, and support for one another.

The experiential activity for forming teams was developed with the above suggestions in mind.

### AN EXPERIENTIAL ACTIVITY TO FORM EFFECTIVE STUDENT TEAMS

#### GOALS OF THE ACTIVITY:

- To enable instructors to construct student teams quickly and effectively, with active participation and self-identification by students

- To form student teams in a manner that generates a strong sense of group potency regarding a group assignment.
- To reinforce students' understanding of the team assignment(s), task interdependence, and outcome interdependence.
- To fully engage students in the team assignment by allowing them some autonomy in team member selection
- To facilitate positive team behaviors and future interactions between team members by clarifying each team member's contribution to the team during the group formation process.
- To form teams in a way that reflects an appropriate understanding of the groups and teams research literature and in a way that may encourage students to look forward to satisfying team assignments in the future.

#### MATERIALS NEEDED:

- A number of cards of different colors, shapes, or other differentiators. There should be enough cards of each color or shape as there are students in the course.
- Flip chart or white board and markers.

#### TIME REQUIRED:

- Approximately 20-30 minutes

#### PREPARATION:

Students should have read and/or listened to a description of the team assignment, including its objectives and deliverables, for the course. This is often described by the instructor as part of the syllabus for a course, or when the assignment is introduced to the class.

#### PROCEDURE:

##### 1. Establish the Criteria: What It Takes to Form an Effective Team

**Outcome Interdependence.** After reviewing the assigned group project, the instructor should ask students to generate a list of their expectations regarding what it will take to successfully complete the team assignment. What are the criteria for an "A" grade on the team project? Does each person in the group share the same grade? What are some other outcomes that are relevant to students in the class? The instructor should solicit responses to these questions from the class as a whole, and should record students' responses on the white board or flip chart for all to see. Responses to this step create an understanding of the outcome interdependence that may be needed for the project.

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**Task Interdependence and Group Roles.** Students are asked to generate a list of the critical roles that different members of each team may need to perform in order for any team to be successful. Additionally, students are asked to generate a list of specific skills sets, characteristics, or behaviors that may enhance the performance of any group assembled to work on the described project. What kind of expertise or prior experience might be good to have within a student group? What skill sets would potentially provide a benefit to teams working on this project? What are the key diversity components relevant to the assignment? (For example, having a woman or a man on a team may be less relevant than having someone who has worked as a manager, documented a process, or implemented a budget.) Responses to this step create an understanding of task interdependence and group roles.

The instructor can add his or her own expectations to this list if specific relevant items are not identified by students. The criteria should be examined carefully by the class to determine if each point listed is unique and comprehensive relative to the other points listed. The instructor may suggest ways to combine similar criteria into appropriate category labels. It is helpful if there are at least as many different criteria or category labels as there are desired number of members of each team. For example, if teams of four to six students are to be formed for the assignment, it is useful if the class can generate six or more different things relevant to effective interaction and successful group performance.

### 2. Color-Code the Criteria

**Self-Identification of What Each Individual Has to Contribute to a Team.** A set of papers of (e.g., six or more) different colors, shapes, or some other obvious demarcation can be used to denote each important characteristic identified by students as relevant to the assignment. The instructor should note what unique color or shape will be used to represent each different category label or criteria listed. The instructor should then ask students to self-identify their potential contribution to any project group to which they may be assigned by choosing any piece of paper that designates characteristics that they possess. For example, if colored pieces of paper are used, some students may choose several different colors to reflect their expertise (e.g., blue), library skills (e.g., pink), and other characteristics (writing proficiency, presentation skills, managerial experience, etc.) that can be applied to the assignment. All of the different pieces of paper should be passed around the room until all students have had the opportunity to choose the different papers that best describe themselves.

In most instances, students will select several “colors” or contributions that they feel they will enhance the group’s performance. Some students may choose only one piece of paper to reflect a role that they are willing and able to perform in a group. It has happened that a few students do

not choose any of the relevant characteristics for the assignment. Although this is not necessarily a problem for the activity, an instructor can circumvent this occurrence by ensuring that one color or shape represents “willingness to work with the group” or a similar, “catch all” designation. By choosing their own characteristics, students exhibit self-efficacy beliefs about what they can contribute to the assignment.

### 3. Facilitate Goal-Directed Self-Selection into Teams

After all the different cards have been passed throughout the classroom, the instructor should ask students to hold up their cards. The instructor should encourage students to look around the room to view the diversity of potential ways class members can contribute to any group. The goal is to have as many different colors or shapes in their groups as possible (e.g., a rainbow of colors or a completed puzzle of shapes). Ideally, every different color or shape, representing each relevant characteristic, will be present in each newly-formed group, and so instructors should carefully direct students to seek out those who can contribute something underrepresented in their groups.

**Establishing Group Potency.** Student teams should be given time, about five minutes, to interact within their groups to explain to each other why they chose their respective cards. This discussion helps to develop and clarify role expectations. Students should realize high degrees of group potency, as they can readily observe that their group has what the class and the instructor believes essential to effective and successful performance.

### 4. Process the Activity with Students

After newly formed student teams have had the opportunity to discuss their potential contribution to their teams, the instructor can reinforce this activity and discuss some of the key aspects of effective teams presented above. First, the instructor should ask students to describe the expertise diversity of their respective teams. Given that each team was required to have at least one of each type of card represented, this should be obvious to students. Second, the instructor should ask students to report their expectations about their newly formed team’s capacity to successfully complete the project or tasks assigned to their teams. Students’ expectations reflect their group potency beliefs. Finally, the instructor may take advantage of the opportunity to review information from the groups and teams literature that addresses the value of team assignments and how the composition of teams can influence the behaviors, experiences, and attitudes of team members and influence team outcomes.

**CONCLUSION**

This paper describes a focused, experiential activity that can be used to help students form teams prior to beginning a course project. The group formation activity relies upon the findings of the research literature regarding groups and teams, and as such the activity attempts to assemble students into teams in a way that maximizes group potency, task interdependence and the formation of appropriate group dynamics and roles, outcome interdependence that reflects students' understanding of the team assignment and their expectations for achieving related goals. Unlike oversimplified or unrealistic random assignment and self-selection approaches to forming teams, and also unlike more complex and time-consuming group formation methods, the described group formation activity is simple yet effective in connecting identifiable, critical group roles to effective group performance and outcomes. The proposed group formation process also encourages students to develop a better understanding about how groups and teams can function effectively and how to enhance the likelihood of achieving various team outcomes. The activity described may also be useful when forming longer-term teams within a cohort of students enrolled in a degree program. Finally, the group formation activity described here incorporates some important features of "real world" teams: Membership on teams is a blend of assignment by the instructor, self-selection by students, and acknowledgement of skills sets and other characteristics required to complete the project. It may be possible to further adapt the activity for forming or assigning teams within organizations.

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