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THE JIGSAW TECHNIQUE: A WAY TO ESTABLISH INDIVIDUAL ACCOUNTABILITY IN GROUP WORK

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The effective use of groups as part of a business school experience includes some proficiency in the use of group techniques. In the field of education these techniques are known as cooperative learning strategies (Johnson & Johnson, 1985, 1987; Slavin, 1983). Cooperative learning has much in common with experiential learning and the more traditional "group work." There is a difference, however, between "having students work in a group and structuring students to work cooperatively" (Johnson & Johnson, 1985). With cooperative learning techniques, a critical component is ensuring that individual accountability exists among group members.

Individual accountability is making sure that every group member "pulls their weight"—that everyone participates in completing the group task. Because the purpose of group work is to maximize the learning of each member, a group is not working effectively if there are individual members who are "slackers" and let others do all the work (Johnson & Johnson, 1987). I call this the "hitchhiker" phenomenon—one person in the group is simply along for the ride. The hitchhiker phenomenon creates negative feelings among group members and often leads to a dislike for group work in general. Thus it is important for instructors to incorporate techniques that ensure individual accountability whenever group work is being implemented.

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The Jigsaw Technique

The jigsaw procedure (Aronson, 1978; Slavin, 1980) is one technique I have used to create individual accountability. In this technique, each student in a team is given a unique topic on which to become an "expert." The students from different teams with the same topics meet in "expert groups" to discuss their topics, and then return to their teams to teach their teammates what they have learned (Slavin, 1983). Thus each team member has only a portion of the information, resources, and/or materials necessary for the task to be completed, and for the group to complete the assignment, *all* members are required to contribute.

I have used this technique when teaching the unit on leadership. Each member of the team is given a reading packet including five readings on different leadership theories and their applications to organizations. Team members are required to read all of the articles; however, they are assigned as an expert for one of the leadership theories. Additionally, they are given a set of questions to answer regarding their assigned theory or model. These questions focus their attention on the basic propositions of the theory, the major contingency variables, and the specific leader behaviors of each model. This assignment is completed outside of class.

During class time, homogeneous groups of experts then meet together to reach consensus on the questions regarding their theory (i.e., all of the Fiedler's Contingency Theory students meet together, all of the Path-goal Model students are together, all of the Substitutes for Leadership students meet, and so on). This process enables the experts to truly learn and understand the theory through discussion with others while also providing them the opportunity to have their questions addressed.

While the experts are meeting in their groups, I walk around the room, listen to the group discussion, and ask specific questions of individual members. Randomly calling on an individual group member to explain an answer also serves to reinforce individual accountability.

The individual experts then return to their base groups and are required to teach and answer questions regarding their theory to the group members. As a final exercise, group members are presented a case and a set of questions integrating all of the theories. (I call this a *group* quiz). This last assignment is the requirement for the group grade.

Outcomes and Pitfalls

There are several positive outcomes of this type of activity. First of all, my students seem to enjoy it. Active learning is simply more fun than passive

learning. More important, students have a better understanding of a topic when they are required to teach it to someone else. By structuring individual accountability through the jigsaw procedure, students are given the responsibility for the teaching-learning process. Thus they feel a responsibility to the group for understanding the material because their group is counting on them. It is very embarrassing for an expert to go back to his or her group without knowing the subject enough to teach it. Thus there is peer pressure toward learning—students who have traditionally been the hitchhikers cannot do so during this type of activity. I have also found that attendance is particularly good when using this technique. Again, because of peer pressure and feelings of responsibility toward group members, students come to class.

From my experience, there are some potential pitfalls that need to be addressed when using the jigsaw technique. Some students may have difficulty learning and understanding the material on their own. As in any class, a diversity of ability levels is common—some students have a better grasp of the material than others. This may lead to frustration in group work in general, but with the jigsaw technique, in which everyone must teach the material, this may be a unique problem. The expert groups should help to address this, especially if the instructor is effective in monitoring during the expert group meeting. The goal of the expert groups is to have all members understand the material so that they *can* go back to their teams and teach their part. If, however, students still do not have a clear understanding of the required material after being in the expert groups, instructors need to provide assistance during the "teaching" time.

Students missing class when they are required to teach their material is also a potential problem. I deal with this by requiring *all* team members to read *all* of the material (even though they are experts on one piece). If one team member is absent, then, the other members know the material enough to complete the task. Having two experts per team is another way to deal with attendance problems. In this case, each expert shares the teaching with another expert.

Although the jigsaw technique ensures for individual accountability, there still may be students who want to let others do all the work. It is important for the instructor to watch for this before students get into their expert groups. A quick check to make sure that all experts have done their assignments and having some contingencies for failure to complete an assignment will help to alleviate this concern. For example, one contingency could be that students who are not prepared are not allowed to participate in the expert groups. This is a particularly strong contingency because students do not want to disappoint their team members nor do they want to face disapproval. Thus, in my experience, this problem has rarely occurred. In fact, just the opposite has

happened. Students who traditionally have been nonparticipants for other group activities seem to be more responsible with this type of assignment. Many students come to see me before class to go over their expert parts and to ensure that they have an adequate understanding of their theory.

In conclusion, I have found that, for the most part, students like working in groups – but only if they are properly structured. No student likes to feel that he or she is doing all the work or that other group members are "pulling his or her grade down." Using the jigsaw technique to ensure accountability can help to address these concerns. In group work, we don't want individual members to be hitchhikers, yet we don't want them to be "chauffeurs" either – we want a "car pool." Ideally, we want shared responsibility and equal participation. The jigsaw procedure is one way to accomplish this.

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