Three Keys to Using Learning Groups Effectively

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Small group-based instructional methods can produce a wide variety of positive educational outcomes. These outcomes, however, only occur when instructors create conditions which motivate students to prepare for and engage in give-and-take discussions. Fortunately, by applying three fundamental principles, instructors can create these conditions in the vast majority of learning groups. These principles, referred to as "KEYS" in this essay, are: 1) promoting individual and group accountability; 2) using assignments that link and mutually reinforce individual work, group work, and total class discussions; and 3) adopting practices that stimulate give-and-take interaction within and between groups. Further, to obtain the best results from using small groups, instructors must observe these keys in managing each of three opportunities (shown as "3 Boxes" in Figure 1) to engage students with course concepts: individual work, small group work, and total class discussion.

ior. The most basic mechanism is requiring individual assignments (especially graded ones) prior to group discussion (e.g. requiring students to turn in written concept summaries at the beginning of class on group assignment days). A second mechanism is using procedures or assignments that cause members to express their point of view during group discussions. For example, some instructors assign one member to make sure that everyone is asked to provide input. The third mechanism is to include peer evaluation in the grading system.

One effective way to promote individual accountability is the Readiness Assurance Process in team learning (Michaelsen & Black, 1994). This process requires individuals to complete a multiple-choice test over a set of pre-assigned readings and turn in their answers. Next, groups re-take the same test and turn in their consensus answers for immediate scoring. This process incorporates all three

the group work seriously. Groups can be held accountable by carefully managing small group and total class discussions. First, assignments for groups (or each phase of a long-term project) must require groups to produce a tangible output. Second, to the extent possible, the output should enable both prompt quality assessment and inter-group comparisons.

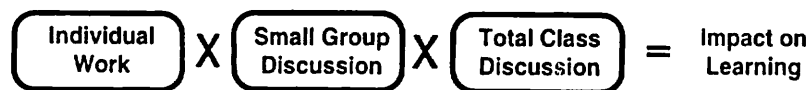## KEY #2 – Using Linked and Mutually Reinforcing Assignments – "3 S's"

The second key to using groups effectively is making sure that the assignments at each stage of the learning process (i.e., the "3 Boxes" in Figure 1) are linked and mutually reinforcing. When this is done, assignments in the first two stages have a powerful positive effect on the learning that occurs in the next stage. To obtain the maximum overall payoff, assignments at each stage should be characterized by "3 S's":

1) **Same problem:** Individuals/groups should work on the same problem, case, or question.

2) **Specific choice:** Individuals/groups should be required to use course concepts to make a specific choice.

3) **Simultaneously report:** Whenever possible, groups should report their choices simultaneously.

The importance of assignments that are linked and mutually reinforcing is illustrated by the experience of a colleague who uses a series of case files to develop medical students' critical thinking (i.e., diagnostic) skills. For many years, she assigned groups to write a series of one-page memos identifying a preliminary diagnosis for each patient but was disappointed in the learning outcomes for two reasons. First, students only worked with part of the cases because groups delegated the work to individual members. Second, correcting the assignment took so long that the value of the feedback was minimal. She now uses the Readiness Assurance Process (described above) to ensure that students have mastered basic concepts and that groups have developed a norm of seeking input from each member before reaching a decision. Then, on the

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Figure 1
Engaging Students with Course Concepts

Individual Work X Small Group Discussion X Total Class Discussion = Impact on Learning

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KEY #1 – Promoting Ongoing Accountability

If students fail to prepare for group work, group assignments are likely to force better students to "carry" their less willing and/or less able peers. Further, improperly managed small-group discussions are likely to degenerate into social events in which little if any learning occurs. Both problems can be avoided by holding individuals and groups accountable for their behavior.

Individual accountability. Instructors can use three quite different mechanisms to promote responsible individual behav-

mechanisms for promoting individual accountability. First, students are directly accountable because the individual scores count as part of the course grade. Second, during the group test, members are invariably asked to voice and defend their choices on *every* question and the immediate feedback provides clear evidence of the importance of obtaining input from everyone on all important decisions. Third, members who fail to contribute are likely to receive a low peer evaluation.

Group Accountability. Without group accountability neither instructor nor students know 1) if their learning goals have been achieved or 2) if students are taking

day of the activity, she adds a vital piece of new information to a set of pre-assigned cases and gives groups a specified length of time to either 1) select a most likely diagnosis from a limited set of alternatives or 2) commit themselves to a position that they do not have enough information to make a definite diagnosis. When the time has elapsed, she gives a signal and the groups simultaneously hold up a legal-sized sheet of paper on which they have recorded their choices. The outcome is a lively discussion *within* the groups followed by a vigorous interchange *between* groups.

KEY #3 — Adopting Practices that Stimulate Idea Exchange

The degree to which group discussions expose students to new perspectives from their peers depends on two factors. The first factor is the extent to which the instructor uses assignments and creates conditions that foster give-and-take group interaction. The other factor is the diversity of opinions, ideas, and perspectives that exist within each group.

Using assignments that require group interaction. The most common reason for a low level of group interaction is the use of assignments that can be completed by independent individual work. For example, if assignments are too easy, one member will simply act on behalf of the group. Assignments that require a great deal of writing can also limit both interaction and learning. If asked to produce a lengthy document, group discussions tend to focus on working out who will write which piece of the total product. By contrast, assignments that require students to use course concepts to make difficult choices (e.g., the medical school example above) always produce high levels of both interaction and learning (Michaelsen, Fink & Knight, 1997).

Removing barriers to participation. Often, members of new groups are reluctant to speak out. One response to this problem is assigning roles within the group, e.g., recorder, summarizer, devil's advocate, etc. However, a more powerful approach is using permanent groups and assignments, practices, and a grading system that foster the development of group cohesion (Michaelsen, Black & Fink, 1996). As groups become more cohesive, trust and support typically build to the point that even naturally quiet members are willing to engage in intense give-and-take interactions with little worry about

being offensive or misunderstood (Watson, Michaelsen & Sharp, 1991). As group members come to see their own success as tied to the success of their group, they are motivated to invest considerable personal energy into doing group work.

In-class group work. Interaction is also likely to be limited unless groups are allowed to do their work in class. In many cases, the cost of meeting outside of class is so great that students will meet just long enough to divide up the work. They will then complete the assignment individually and learn little from each other. Their output is a group product in name only, and any cohesiveness developed during the initial meeting is likely to be offset by a concern that other members might fail to do their part.

Creating diverse groups. Another way to expose students to new ideas is making sure that groups are relatively large (5-7 members) and as diverse as possible. Creating diverse groups involves two steps. The first is identifying the dimensions that make a difference in student performance in each specific course, e.g., majors, previous course work, relevant job experience, etc. The other is sorting members into groups so that member assets and liabilities are spread as evenly as possible across groups (Michaelsen & Black, 1994).

Summary and Conclusions

By using assignments in each of the "3-Boxes" (see Figure 1) that are completed during class time, and are characterized by the "3-S's" (Same problems, Specific choice, and Simultaneously reporting), instructors create the conditions needed for effective learning groups. These conditions include: individual and group accountability, the need and opportunity for group interaction, and the motivation to engage in give-and-take discussion. In the vast majority of groups, the net result will be increased learning and high satisfaction for both students and instructors.

References

Michaelsen, L. K. & Black, R. H. (1994). Building learning teams: The key to harnessing the power of small groups in higher education. In S. Kadel & J. Keehner (Eds.), *Collaborative Learning: A Sourcebook for Higher Education*, Vol. 2 (pp. 65-81). State

College PA: National Center for Teaching, Learning, and Assessment.

Michaelsen, L. K., Black, R. H,. & Fink, L. D. (1996). What every faculty developer needs to know about learning groups. In L Richlin (Ed.), *To Improve the Academy: Resources for Faculty, Instructional and Organizational Development* (pp. 31-58). Stillwater, OK: New Forums Press.

Michaelsen, L. K., Fink, L. D,. & Knight, A. (1997). Designing Effective Group Activities: Lessons for Classroom Teaching and Faculty Development. In D. DeZure (Ed.), *To Improve the Academy: Resources for Faculty, Instructional and Organizational Development* (pp. 373-397). Stillwater, OK : New Forums Press.

Watson, W. E., Michaelsen, L. K., & Sharp, W. (1991). Member competence, group interaction and group decision-making: A longitudinal study. *Journal of Applied Psychology*, 76, 801-809.

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