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New Chalk Talk

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Cooperative Learning (2)

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An accepted wisdom in higher education is that students' learning depends mostly on what they do in and out of class and not on what the instructor does, i.e. they learn best when they are involved in their own learning. This kind of learning has been coined "active learning". The last *New Chalk Talk* issue (Volume 2, issue 2) addressed the subject of cooperative learning as a strategy that could be conducive to active learning when it is implemented properly. As mentioned, the three most important aspects of cooperative learning are the group, the task and the assessment. This issue will address the last two features.

B) Creating and evaluating effective group tasks/assignments

A well-designed assignment is essential for the success of the method. The following cooperative learning project was adapted from an example found on the internet. We will use it as an illustration.

> *A group of three students will be assigned to investigate an issue of bioethics. Members of the group will be asked to cooperate to learn about the personal, scientific, social, and ethical dimensions of the issue and prepare to participate in a debate on the issue. Class members are to be presented with a two page summary of the results of the group's investigation and given at least two days to prepare to debate the issue in class. The three students will a) participate in the debate and b) will present a summary of the debate in written form.*

1) Explaining the task:

As with regular assignments, the instructor should take the time to write out the requirements. The goals of the assignment should be concrete, and the instructions to the group should be very clear, including instructions on how the students will be graded. In the above description, the latter was not addressed nor was the bioethical issue explicitly spelled out. More concrete explanations are definitely needed unless they are added as the project progresses.

2) Designing the task:

A properly designed task should contain some key elements of cooperative learning, namely *positive interdependence, individual accountability and promotion of face-to-face interactivity.*

a) To create "**positive interdependence**", students need to depend on each other for the project to be completed. Using the above example, the students are asked to produce a single product ("*a two page summary of the results of the group's investigation", "a summary of the debate in written form")* which leads to goal interdependence. The task implicitly allows for a special role to be assigned to each person (role interdependence: "*learn about the personal, scientific, social, and ethical dimensions")* and for the group to be responsible for each person's correct knowledge of all aspects of the problem (learning goal interdependence: "*The three students will … participate in the debate").* Finally the task requires more than one point-of-view, set of data or background (resource interdependence)

b) A high level of **individual accountability** for group members should be structured in the task. One way of ensuring that students are held accountable is to give individual quizzes or randomly calling on a student to present their group's answer or method etc.

c) Asking open-ended questions or questions with multiple answers encourages i**nteractivity**. Different viewpoints are expressed and students provide feedback to one another and challenge one another's conclusions creating a great deal of discussion among group members.

3) **Evaluating group work**

a) Create a set of criteria or rubrics against which students can measure their product(s). Members of a group should receive immediate, unambiguous and meaningful feedback (preferably involving direct comparisons with the performance outputs from other groups). In general, the more immediate the feedback the better it is at promoting team fusion.
b) The use of group grades is controversial, but Johnson, Johnson and Smith (1991) report good results from encouraging a "we sink or swim together" approach. Group work grades may constitute 5 to 30% of the total grade.
c) Individual student learning has to be evaluated the usual way through written exams, papers, oral presentations, quizzes or the like.
d) Finally, members of a group should be taught how to evaluate each other's contribution which should be included in the individual student's evaluation.

Sources:

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