



INNOVATION ABSTRACTS

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Critical Thinking and Collaborative Learning

While most experts agree that critical thinking can and should be taught, many disagree with how it is being taught. Those who disagree contend that teachers are teaching students to think critically as individuals, while most problem solving in everyday life occurs in groups. Experts point out that individuals who problem-solve quite well individually perform abysmally in group situations, and that the sum of group thought is usually less than the sum of individual thought—a phenomenon referred to as “groupthink.” Also, in recent years employers have begun to call attention to the deficit in group problem solving skills which they encounter in their college-trained employees. The teaching of critical thinking is not enough. Educators must also discover ways to teach meaningful critical thinking skills. One method is the collaborative or group learning method.

Through careful design of the classroom setting, specific instruction in the evaluative method, and precise structuring of assignments, students can solve pertinent problems which require the development and use of critical thinking skills. At the same time, students will benefit from experience in collaboration. Practical activities which require students to evaluate a problem, by establishing group criteria and applying those criteria to problems, will foster the growth of collaborative critical thinking abilities in students.

One successful method of organizing such an activity includes three major steps. The first step includes establishing groups and individual responsibilities within groups. The instructor may select groups in a variety of ways (however, I have found that odd-numbered groups of not more than five per group work well). Each group, then, can select a group leader, a presenter, and a secretary. The entire group is responsible for determining the materials the secretary will include in the group report. The group leader's responsibilities include ensuring that all members contribute, organizing the final report, and leading the group discussion. The presenter is responsible for the oral delivery of the final group report to the class. The secretary is responsible for compiling, from the notes of the group members, the final report under the direction

of the group leader and members. All group members including leaders, presenters, and secretaries are responsible for researching, note taking, setting criteria, and evaluating the problem.

Once students understand their group roles, the instructor can make the assignment. Students should have completed an appropriate reading assignment that will force them to formulate criteria by which they will evaluate a problem. Instruct students to keep a careful record of these criteria, as well as the application of specific elements of the problem. Explain that students must make and justify judgments. Tell students that their job is to determine whether particular outcomes are good or bad, and why they are one or the other. To keep the activity within a manageable time frame, allot a specific amount of time for each task. Inform students of the time limits; i.e., they have 15 minutes for research, ten minutes for compilation, etc. After students are aware that they have a schedule for solving the problem, describe the problem. The following problems, taken from different disciplines, have been used successfully by four FCCJ instructors:

European History: What caused the French Revolution? What were the gains and losses to each segment of society? Do the gains outweigh the losses? Do the gains justify the violence that accompanied the Revolution? Would it have been desirable to have prevented the Revolution? If so, how could it have been prevented? Compare the social, economic, political, and ecclesiastical positions of each estate at the beginning with the end of the Revolution. Each group will establish a unique criterion for evaluating the conditions of the estates.

Anita Morris, History

Economics: One of the most pressing problems facing the government is the federal budget deficit. There are many proposed solutions to the problem. During



the process of reading/researching, students will analyze the several aspects of the proposed solutions. Why did the deficit occur? Is a budget deficit ever "a good thing" for a country? Why? Why not? Is the deficit best solved by raising taxes or curtailing government spending? What are the advantages and disadvantages of each? Which solution do you think is the most successful? Why or why not?

Elizabeth Otto, Economics

Political Science: The United States recognizes the vast expansion and modernization of the Soviet military and realizes the danger to Western/U.S. interests; however, the Soviet leadership is advocating military reductions and appears to seek a warming of relations between the Soviet Union and the United States. Considering the current budget deficit crunch, should a president advocate increases in military expenditures to counter the threat as a safety measure or should he gamble that the political overtures of the USSR are genuine and likely to be long term, even after the present Soviet leader has departed from politics?

Edward Fleming, Political Science

Psychology: In Europe, a woman was near death from cancer. One drug might save her, a form of radium that a druggist in the same town had recently discovered. The druggist was charging \$2000, ten times what the drug cost him to make. The sick woman's husband, Heinz, went to everyone he knew to borrow money; but he could gather only about half of the drug's cost. He told the druggist that his wife was dying and asked him to sell the drug for less money or to let him pay later. But the druggist said, "No." The husband got desperate and broke into the man's store to steal the drug for his wife. Should the husband have done that? Why or why not? (Rest, 1968)

Robert Rainey, Psychology

Having made the assignment clear, the instructor may start the groups. A suggested schedule for group work is 15 minutes for research, 10 for compilation of

data, 40 for presentations and discussion, and 10 for closure. Students may use the closure period to comment on material presented by other groups or for revised summary. It is also the time the instructor will use to summarize the work of groups. The instructor must keep the students moving from one part of the activity to the next. If students are left to manage time on their own, they frequently are unable to move ahead.

The collaborative/critical thinking learning method is time-consuming but rewarding. Because it is time-consuming, it may be appropriate only infrequently. Nevertheless, this instructor has found this method to be an excellent one for introducing specific units of study. However, when students are accomplishing memory-level learning independently, this method should be the "main course." Not only does it develop the highest level of learning ability but it encourages students to use that ability in the most practical way—cooperatively.

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