

## **Academic Controversy: Increase Intellectual Conflict And Increase The Quality Of Learning<sup>1</sup>**

David W. Johnson and Roger T. Johnson

*Brothers David and Roger Johnson grew up mainly on a farm in Indiana, parted during their college years, and then joined together at the University of Minnesota in the late 1960s. Roger was a central person in the inquiry science movement in the 1960s and was a great lover of discrepant events and disequilibrium. David focused his research in the 1960s on conflict resolution and the need to demonstrate the positive value of conflict. Together, with important colleagues such as Dean Tjosvold and Karl Smith, they developed a theory of academic controversy and conducted numerous validating studies. As two brothers who had argued and disagreed all their lives (and still do), they had no difficulty in recognizing that you can gain important insights from people you initially believe are misinformed and mistaken.*

*Together they founded and are co-directors of the Cooperative Learning Center at the University of Minnesota. David is Professor of Educational Psychology, Roger is Professor of Education. David's email address is <johns010@tc.umn.edu>; Roger's is <johns046@tc.umn.edu>.*

### **The Importance Of Intellectual Conflict**

*Have you learned lessons only of  
those who admired you, and were tender*

---

<sup>1</sup>Chapter 10. *New Paradigms for College Teaching*. 1997. Wm. E. Campbell & Karl A. Smith, Eds. Interaction Book Company.

*with you, and stood aside for you?*

*Have you not learned great lessons  
from those who braced themselves  
against you, and disputed the passage  
with you?*

Walt Whitman, 1860

In 1859 Horace Greeley and Henry David Thoreau were having a discussion about John Brown's exploits at Harper's Ferry. "*No matter how well intended John Brown was,*" Horace said, "*his methods were completely unacceptable. The man broke the law! Terrorism for a good cause is still terrorism. It does not follow that because slavery is wrong, John Brown's actions were right. No matter how opposed to slavery one is, one cannot condone what John Brown did.*" "Now Horace," Henry replied, "*you are missing the whole point. It does not matter whether John Brown broke the law or not. It only matters what he symbolizes. And he symbolizes eternal justice, glory, and devotion to principle. We should pay homage to the ideas John Brown represents, not get caught in a mundane discussion of legalities.*"

Thomas Jefferson would have applauded Greeley and Thoreau's discussion. Jefferson noted, "*Difference of opinion leads to inquiry, and inquiry to truth.*" Jefferson had a deep faith in the value and productiveness of conflict. He is not alone. A number of 20th-Century theorists have pointed out the value of conflict. Piaget (1950) proposed that it is disequilibrium within a student's cognitive structure that motivates transitions from one stage of cognitive reasoning to another. He believed that conflict among peers

is an essential cause of a shift from egocentrism to accommodation of other's perspectives. Piaget proposed that a person, with an existing way of organizing his or her cognitive structures, enters into cooperative interaction with peers. Conflicts inevitably result that create internal disequilibrium and the inability to assimilate current experiences into existing cognitive structures. The person then searches for a new equilibrium by decentering and accommodating the perspectives of others. This creates the need to organize the person's cognitive structures in a new way. Kohlberg (1969) adopted Piaget's formulation as an explanation for the development of moral reasoning.

Conflict theorists noted that conflict had many positive benefits (Coser, 1956; Johnson & Johnson, 1995a; Simmel, 1955). Berlyne (1966) emphasized that conceptual conflict creates epistemic curiosity which motivates the search for new information and the reconceptualization of the knowledge one already has. Hoffman and Maier (1972) insisted that higher-quality problem solving depended on conflict among group members. Bruner (1961) proposed that conceptual conflict was necessary for discovery learning and could be created by (a) presenting events that are discrepant with what the student already knows and understands, (b) presenting "mysterious" events that seem inexplicable on the basis of students' present knowledge, and (c) having students argue and disagree with the instructor or with each other. Johnson (1970) posited that since knowledge results from social processes (i.e., "truth" is derived by scholars seeking consensus through discussion), then conflict among ideas, theories, and conclusions becomes an essential part of building a conceptual structure that everyone agrees is valid.

The power of conflict may be clearly seen in the arts. Creating a conflict is an accepted writer's tool for capturing an audience. All drama hinges on conflict. Playwrights and scriptwriters create a conflict whenever they want to gain and hold

viewer's attention, create viewer interest and emotional involvement, and excite and surprise viewers. A general rule of modern novels is that if a conflict is not created within the first three pages of the book, the book will not be successful.

Educators, on the other hand, often avoid and suppress any sort of intellectual conflict in the classroom. Despite the (a) daily demonstration of the power of conflict in dramatic productions and (b) the recommendation by theorists that conflict be an essential aspect of learning and teaching, educators have by and large avoided and suppressed intellectual conflict. Far from being a standard instructional procedure, in most colleges creating intellectual conflict is the exception, not the rule. Why do faculty avoid creating intellectual conflict among and within students? The answer to that question is a somewhat of a mystery.

### **The Avoidance Of Intellectual Conflicts**

There are a number of hypotheses as to why conflict is so avoided and suppressed in academic situations (Johnson, 1970; Johnson & F. Johnson, 1975; Johnson, F. Johnson, & Johnson, 1976; Johnson & R. Johnson, 1979, 1989, 1995a).

**The first hypothesis is that fear blocks faculty and students from engaging in intellectual conflicts.** Since destructively managed conflicts create divisiveness and hostility, when conflicts among students occur, faculty and students may have some anxiety as to whether constructive or destructive outcomes will result. Palmer (1990, 1991), for example, believes that fear of conflict blocks good teaching and learning and recommends that faculty have the courage to promote intellectual conflict among students and between students and faculty despite their apprehensions about doing so.

**Hypothesis two is that ignorance of how to engage in intellectual conflict blocks faculty and students from engaging in intellectual conflicts.** Until recently there has not been a clear set of instructional procedures that faculty can use in a wide variety of subject areas and with any age student. The development of structured academic controversy gives faculty a clear instructional procedure they can use to structure intellectual conflicts among students in ways that result in increased learning.

**The third hypothesis is that lack of training programs to teach faculty how to use intellectual conflict effectively blocks faculty and students from engaging in intellectual conflicts.** Most faculty members have not been trained in how to create intellectual conflicts among students and how to use the conflicts to increase students' learning. Such training programs exist only at a few institutions, such as the University of Minnesota. As a consequence, most faculty do not know how to take advantage of the few instructional procedures that are available.

**Hypothesis four is that our culture is so anti-conflict that faculty do not see the promotion of intellectual conflicts as a possibility.** The view that conflict is a potential positive and powerful force on learning may be culturally unacceptable. A general feeling in our society is that conflicts are bad and should be avoided. Many people, consequently, believe that a well-run classroom is one in which there are no conflicts among students.

**The fifth hypothesis is that pedagogical norms may block faculty and students from engaging in intellectual conflicts.** Current pedagogy promotes the use of a performer-spectator approach to teaching. Faculty lecture, often in an interesting and entertaining way, and students sit and watch and take notes. In an attempt to cover a whole field in a semester or year, students are often exposed to a blizzard of information

within a lecture. Departmental chairs and colleagues may equate telling with teaching. In such a learning climate, the norms of what is acceptable teaching practice may not include creating intellectual conflict among students.

**Hypothesis six is that inertia, the power of the status quo, may be so great that faculty just do not try anything new.** Faculty may choose to play it safe by only lecturing because it is their personal tradition and the tradition of their college and colleagues.

These six barriers are formidable obstacles to overcome if faculty are to utilize the power of intellectual conflict in their teaching. In order to give faculty the courage to change their teaching practices and to include conflict as a center-piece of instruction, faculty members must know what academic controversy is, the outcomes it promotes, and the procedures that operationalize its use in learning situations.

### **What Is Academic Controversy?**

*The best way ever devised for seeking the truth in any given situation is advocacy: presenting the pros and cons from different, informed points of view and digging down deep into the facts.*

Harold S. Geneen, Former CEO, ITT

In an English class students are considering the issue of civil disobedience. They learn that in the civil rights movement, individuals broke the law to gain equal rights for minorities. In numerous literary works, such as Huckleberry Finn, individuals wrestle with the issue of breaking the law to redress a social injustice. Huck wrestles with the issue of breaking the law in order to help Jim, the run-away slave. In the 1970s and 1980s prominent public figures from Wall Street to the

White House have felt justified in breaking laws for personal or political gain. In order to study the role of civil disobedience in a democracy, students are placed in a cooperative learning group of four members. The group is then divided into two pairs. One pair is given the assignment of making the best case possible for the constructiveness of civil disobedience in a democracy. The other pair is given the assignment of making the best case possible for the destructiveness of civil disobedience in a democracy. In the resulting conflict, students draw from such sources as the Declaration of Independence by Thomas Jefferson, Civil Disobedience by Henry David Thoreau, Speech at Cooper Union, New York by Abraham Lincoln, and Letter from Birmingham Jail by Martin Luther King, Jr. to challenge each other's reasoning and analyses concerning when civil disobedience is, or is not, constructive.

*Academic controversy* exists when one student's ideas, information, conclusions, theories, and opinions are incompatible with those of another, and the two seek to reach an agreement. Controversies are resolved by engaging in what Aristotle called *deliberate discourse* (i.e., the discussion of the advantages and disadvantages of proposed actions) aimed at synthesizing novel solutions (i.e., *creative problem solving*). The instructor guides students through the following steps (Johnson, 1970; Johnson & F. Johnson, 1975/1994; Johnson, F. Johnson, & Johnson, 1976; Johnson & R. Johnson, 1979, 1989, 1995a):

1. **Research And Prepare A Position:** Each pair develops the position assigned, learns the relevant information, and plans how to present the best case possible to the other pair. Near the end of the period pairs are encouraged to compare notes with pairs from other groups who represent the same position.

2. **Present And Advocate Their Position:** Each pair makes their presentation to the opposing pair. Each member of the pair has to participate in the presentation. Students are to be as persuasive and convincing as possible. Members of the opposing pair are encouraged to take notes, listen carefully to learn the information being presented, and clarify anything they do not understand.
3. **Engage In An Open Discussion In Which They Refute the Opposing Position And Rebut Attacks On Their Own Position:** Students argue forcefully and persuasively for their position, presenting as many facts as they can to support their point of view. The group members analyze and critically evaluate the information, rationale, and inductive and deductive reasoning of the opposing pair, asking them for the facts that support their point of view. They refute the arguments of the opposing pair and rebut attacks on their position. They discuss the issue following a set of rules to help them criticize ideas without criticizing people, differentiate the two positions, and assess the degree of evidence and logic supporting each position. They keep in mind that the issue is complex and they need to know both sides to write a good report.
4. **Reverse Perspectives:** The pairs reverse perspectives and present each other's positions. In arguing for the opposing position, students are forceful and persuasive. They add any new information that the opposing pair did not think to present. They strive to see the issue from both perspectives simultaneously.
5. **Synthesize And Integrate The Best Evidence And Reasoning Into A Joint Position:** The four members of the group drop all advocacy and synthesize and integrate what they know into factual and judgmental conclusions that are summarized into a joint position to which all sides can agree. They (a) finalize



the report (the instructor evaluates reports on the quality of the writing, the logical presentation of evidence, and the oral presentation of the report to the class), (b) present their conclusions to the class (all four members of the group are required to participate orally in the presentation), (c) individually take the test covering both sides of the issue (if every member of the group achieves up to criterion, they all receive bonus points), and (d) process how well they worked together and how they could be even more effective next time.

**Table 1 Controversy, Debate, Concurrence-Seeking, And Individualistic Processes**

	Controversy	Concurrence Debate	Seeking	Individualist
c	Categorizing And Organizing Information To Derive Conclusions	Categorizing And Organizing Information To Derive Conclusions	Categorizing And Organizing Information To Derive Conclusions	Categorizing And Organizing Information To Derive Conclusions
	Presenting, Advocating, Elaborating Position And Rationale	Presenting, Advocating, Elaborating Position And Rationale	Active Presentation Of Position	No Oral Statement Of Positions
	Being Challenged By Opposing Views	Being Challenged By Opposing Views	Quick Compromise To One View	Presence Of Only One View
	Conceptual Conflict And Uncertainty About Correctness Of Own Views	Conceptual Conflict And Uncertainty About Correctness Of Own Views	High Certainty About The Correctness Of Own Views	High Certainty About The Correctness Of Own Views
	Epistemic Curiosity And Perspective Taking	Epistemic Curiosity	No Epistemic Curiosity	No Epistemic Curiosity
	Reconceptualization , Synthesis, Integration	Closed-Minded Adherence To Own Point Of View	Closed-Minded Adherence To Own Point Of View	Closed-Minded Adherence To Own Point Of View

High Achievement, Positive Relationships, Psychological Health and Social Competencies	Moderate Achievement, Relationships, Psychological Health	Low Achievement, Relationships, Psychological Health	Low Achievement, Relationships, Psychological Health
--	---	--	--

Structured controversies are most commonly contrasted with concurrence seeking, debate, and individualistic learning. *Debate* exists when two or more individuals argue positions that are incompatible with one another and a judge declares a winner on the basis of who presented their position the best. An example of debate is when each member of a group is assigned a position as to whether more or less regulations are needed to control hazardous wastes and an authority declares as the winner the person who makes the best presentation of his or her position to the group. *Concurrence seeking* occurs when members of a group inhibit discussion to avoid any disagreement or arguments, emphasize agreement, and avoid realistic appraisal of alternative ideas and courses of action. Concurrence seeking is close to the *groupthink* concept of Janis (1982) in which members of a decision-making group set aside their doubts and misgivings about whatever policy is favored by the emerging consensus so as to be able to concur with the other members. The underlying motivation of groupthink is the strong desire to preserve the harmonious atmosphere of the group on which each member has become dependent for coping with the stresses of external crises and for maintaining self-esteem. *Individualistic efforts* exist when individuals work alone at their own pace and with their set of materials without interacting with each other, in a situation in which their goals are unrelated and independent from each other (Johnson, Johnson, Smith, 1991).

Table 2: Social Interdependence And Conflict

**Controversy    Debate    Concurrence-    Individualistic  
Seeking**

Positive Goal Interdependence	Yes	No	Yes	No
Resource Interdependence	Yes	Yes	Yes	No
Negative Goal Interdependence	No	Yes	No	No
Conflict	Yes	Yes	No	No

A key to the effectiveness of conflict procedures for promoting learning is the mixture of cooperative and competitive elements within the procedure (see Table 2). The greater the cooperative elements and the less the competitive elements, the more constructive the conflict (Deutsch, 1973). Cooperative elements alone, however, do not ensure maximal productivity. There has to be both cooperation and conflict. Thus, controversy is characterized by both positive goal and resource interdependence as well as by conflict. In a controversy, students are required to advocate opposing positions (conflict) with the intent of learning both sides so all group members can come to consensus about a synthesis of the two positions (positive goal interdependence).

Debate has positive resource interdependence, negative goal interdependence, and conflict. In a debate, students are required to advocate opposing positions (conflict) knowing that a judge will determine who wins (negative goal interdependence) and that they have only one side of the information (resource interdependence). Within concurrence seeking there is positive goal interdependence (students are required to reach consensus about the issue) and resource interdependence (students realize they only have half the information), but no conflict. Within individualistic learning situations there is

neither interdependence nor intellectual conflict; students study both sides of the issue without having to advocate either.

### **How Students Benefit**

Whenever faculty want students to be emotionally involved in and committed to learning, controversy is needed. Intellectual "disputed passages" create numerous benefits for students when they (a) occur within cooperative learning groups and (b) are carefully structured to ensure that students manage them constructively. The outcomes of controversy may be grouped into three broad outcomes (Johnson & Johnson, 1989, 1995a):

**Effort to achieve.** Compared with concurrence-seeking, debate, and individualistic efforts, controversy tends to result in greater motivation to achieve, greater search for more information about the topic being studied, greater mastery and retention of the subject matter being studied, greater ability to generalize the principles learned to a wider variety of situations, more frequent use of higher level reasoning strategies, higher-quality decisions and solutions to complex problems for which different viewpoints can plausibly be developed, more frequent creative insights into the issues being discussed, more frequent syntheses combining more than one perspectives, and greater task involvement reflected in greater emotional commitment to solving the problem, greater enjoyment of the process, and more feelings of stimulation and enjoyment. Controversy tends to be fun, enjoyable, and exciting.

**Positive interpersonal relationships:** Controversy promotes greater liking and social support among participants than does debate, concurrence-seeking, no controversy, or individualistic efforts.

**Psychological health and social competence.** Compared with concurrence-seeking, debate, and individualistic efforts, controversy tends to result in higher academic self-

esteem and greater perspective-taking accuracy. Being able to manage disagreements and conflicts constructively enables individuals to cope with the stresses involved in interacting with a variety of other people.

### **Process of Controversy**

*Since the general or prevailing opinion on any subject is rarely or never the whole truth, it is only by the collision of adverse opinion that the remainder of the truth has any chance of being supplied.*

John Stuart Mill

Rique Campa, a Professor in the Department of Fisheries and Wildlife at Michigan State University, asked his class, “*Can a marina be developed in an environmentally sensitive area where piping plovers (a shorebird) have a breeding ground?*” He assigns students to groups of four, divides each group into two pairs, and assigns one pair the “*Developer-Position*” and the other pair the “*Department of Natural Resources Position.*” He then follows the structured academic controversy procedure over several class periods and requires students to do extensive research on the issue. Students research the issue, prepare a persuasive case for their position, present their position in a compelling and interesting way, refute the opposing position while rebutting criticisms of their position, take the opposing perspectives, and derive a synthesis or integration of the positions. In conducting the controversy, Professor Campa is operationalizing the theoretical process by which controversy works.

Campa is following the advice of a number of developmental (Hunt, 1964; Kohlberg, 1969; Piaget, 1928, 1950), cognitive (Berlyne, 1966; Hammond, 1973), social (Janis, 1982; Johnson, 1970, 1979, 1980; Johnson & F. Johnson, 1975; Johnson, F. Johnson, &

Johnson, 1976; Johnson & R. Johnson, 1979, 1989, 1995a; Johnson, Johnson, & Smith, 1988), and organizational (Maier, 1970) psychologists who theorized about the processes through which conflict leads to the above outcomes. On the basis of their work, we have proposed the following process (Johnson & Johnson, 1989, 1995a):

1. When individuals are presented with a problem or decision, they have an initial conclusion based on categorizing and organizing incomplete information, their limited experiences, and their specific perspectives.
2. When individuals present their conclusion and its rationale to others, they engage in cognitive rehearsal, deepen their understanding of their position, and employ higher-level reasoning strategies.
3. When individuals are confronted by other people with different conclusions based on other people's information, experiences, and perspectives, they become uncertain as to the correctness of their views. A state of conceptual conflict or disequilibrium is aroused.
4. Uncertainty, conceptual conflict, and disequilibrium motivate an active search for more information, new experiences, and a more adequate cognitive perspective and reasoning process (i.e., *epistemic curiosity*) in hopes of resolving the uncertainty. Divergent attention and thought are stimulated.
5. By adapting their cognitive perspective and reasoning through understanding and accommodating the perspective and reasoning of others, a new, reconceptualized, and reorganized conclusion is derived. Novel solutions and decisions that, on balance, are qualitatively better are detected.

### **Key Elements For Making Controversy Constructive**

*He that wrestles with us strengthens our nerves, and sharpens our skill. Our antagonist is our helper.*

Edmund Burke, *Reflection of the Revolution in France*

Although controversies can operate in a beneficial way, they will not do so under all conditions. As with all types of conflicts, the potential for either constructive or destructive outcomes is present in a controversy. Whether there are positive or negative consequences depends on the conditions under which controversy occurs and the way in which it is managed. These key elements are as follows (Johnson & Johnson, 1979, 1989, 1995a):

1. **A cooperative context.** Communication of information is far more complete, accurate, encouraged, and utilized in a cooperative context than in a competitive context. Controversy in a cooperative context promotes open-minded listening to the opposing position, while in a competitive context controversy promotes a closed-minded orientation in which individuals were unwilling to make concessions to the opponent's viewpoint and refused to incorporate any of the opponent's viewpoint into their own position.
2. **Heterogeneous participants.** Heterogeneity among individuals leads to potential controversy, and to more diverse interaction patterns and resources for achievement and problem-solving.
3. **Relevant information distributed among participants.** The more information individuals have about an issue, the more successful their problem solving.
4. **Social skills.** In order for controversies to be managed constructively, individuals need a number of conflict management skills, such as disagreeing with each

other's ideas while confirming each other's personal competence, and seeing the issue from a number of perspectives.

5. **Rational argument.** Rational argumentation includes generating ideas, collecting and organizing relevant information, using inductive and deductive logic, and making tentative conclusions based on current understanding.

### **Structuring Academic Controversies**

*Conflict is the gadfly of thought. It stirs us to observation and memory. It instigates invention. It shocks us out of sheeplike passivity, and sets us at noting and contriving...Conflict is a "sine qua non" of reflection and ingenuity.*

John Dewey, *Human Nature and Conduct: Morals Are Human*

Over the past 25 years, we have (a) developed and tested a theory of controversy (Johnson, 1970, 1979; Johnson & Johnson, 1979, 1985, 1987, 1989; Johnson, Johnson & Smith, 1986), (b) trained instructors and professors throughout North America and numerous other countries in the use of academic controversy to field-test and implement the controversy procedure, and (c) developed a series of curriculum units on energy and environmental issues structured for academic controversies. The basic format for doing so follows. A more detailed description of conducting academic controversies may be found in Johnson and Johnson (1995a).

In order to use academic controversies in your classes, you should engage in the following steps.

#### **Creating A Cooperative Context**



First, you create a cooperative context for the controversy. The context within which conflicts occur largely determines whether the conflict is managed constructively or destructively (Deutsch, 1973; Johnson & Johnson, 1989; Tjosvold & Johnson, 1983; Watson & Johnson, 1972). There are two possible contexts for conflict: cooperative and competitive (in individualistic situations individuals do not interact and, therefore, no conflict occurs). When participants are in competition with each other, they will go for victory rather than a constructive resolution of the conflict. It is only when participants focus on their joint goals and strive to maximize mutual benefits that a constructive resolution to conflicts is sought. The easiest way to establish a cooperative context for intellectual conflict is to use cooperative learning. When lessons are structured *cooperatively*, students work together to accomplish shared learning goals. There is far more to cooperative learning, however, than a seating arrangement. It is only when five basic elements are carefully structured that a group is cooperative. The five essential elements are: Positive interdependence, individual accountability, face-to-face promotive interaction, social skills, and group processing.<sup>2</sup>

### **Make Pre-instructional Decisions And Preparations**

Second, you make pre-instructional decisions and preparations. You decide on the objectives for the lesson. You choose a topic that has content manageable by the students and on which at least two well-documented positions (pro and con) can be prepared. You plan how to assign students randomly to groups of four and then divide them into random pairs. You then plan and prepare the instructional materials so that group members know

---

<sup>2</sup>See chapter 9 for a more complete description of cooperative learning—eds.

what position they have been assigned and where they can find supporting information.

The following materials are helpful for each position:

1. A clear description of the group's task.
2. A description of the phases of the controversy procedure and the interpersonal and small group skills to be used during each phase.
3. A definition of the position to be advocated with a summary of the key arguments supporting the position.
4. Resource materials (including a bibliography) to provide evidence for the elaboration of the arguments supporting the position to be advocated. You create resource interdependence by giving each pair half of the materials.

### **Explain And Orchestrate The Academic Task, Cooperative Structure, and Controversy Procedure**

**You explain the academic task** so that students are clear about the assignment and understand the objectives of the lesson. Direct teaching of concepts, principles, and strategies may take place at this point. The task must be structured so that there are at least two well-documented positions (pro and con). The choice of topic depends on the interests of the instructor and the purposes of the course.

**You structure positive interdependence by assigning two group goals.** You tell students to:

1. Arrive at a consensus concerning the answer to the question posed and produce a single group report detailing the nature of their decision and its rationale.

Students are responsible for ensuring that all group members participate in writing a high quality group report. Groups can also be asked to make a presentation of their report to the class.

2. Ensure that all group members master all the information relevant to both sides of the issue. Students are responsible for ensuring all group members score highly on a test on both positions that each student takes individually.

To supplement the effects of positive goal interdependence, the materials are divided among group members (resource interdependence) and bonus points may be given if all group members score above a preset criterion on the test (reward interdependence).

The purpose of the controversy is to maximize each student's learning. **You structure individual accountability** by ensuring that each student participates in each step of the controversy procedure, by individually testing each student on both sides of the issue, and by randomly selecting students to explain their group's answers. Next, **you give students the instructions for engaging in an academic controversy:**

1. **Learning positions.** Meet with your partner and (a) learn your assigned position and its supporting arguments and information and (b) plan how to advocate your position effectively. Read the materials supporting your position. Find more information in the library and in reference books to support your position. Give the opposing pair any information found supporting the opposing position. Prepare a persuasive presentation to be given to the other pair. Prepare a series of persuasive arguments to be used in the discussion with the opposing pair. Plan with your partner how to advocate your position effectively. Make sure you and your partner master the information supporting your assigned position and present it in a persuasive and complete way so that the other group members will comprehend and learn the information.
2. **Presenting positions.** Present the best case for your position to ensure it gets a fair and complete hearing. Be forceful and persuasive in doing so. Use more than

one medium. Listen carefully to and learn the opposing position. Take notes and clarify anything you do not understand.

3. **Discussing the issue.** Openly discuss the issue by freely exchanging information and ideas. Argue forcefully and persuasively for your position, presenting as many facts as you can to support your point of view. Listen critically to the opposing pair's evidence and reasoning, probe and push the opposing pair's thinking, ask for data to support assertions, and then present counter arguments. Defend your position. Compare the strengths and weaknesses of the two positions. Refute the claims being made by the opposing pair, and rebut the attacks on your position. Follow the specific rules for constructive controversy. Take careful notes on and thoroughly learn the opposing position. Sometimes a "time-out" period will be provided so you can caucus with your partner and prepare new arguments. Your teacher may encourage more spirited arguing, take sides when a pair is in trouble, play devil's advocate, ask one group to observe another group engaging in a spirited argument, and generally stir up the discussions. Remember, this is a complex issue and you need to know both sides to write a good report. Make sure you understand the facts that support both points of view.
4. **Reversing Perspectives.** Change chairs with the other pair. Present the opposing pair's position as if you were they. Use your notes to do so. Be as sincere and forceful as you can. Add any new facts you know of. Elaborate their position by relating it to other information you have previously learned.
5. **Reaching a decision.** Drop your advocacy of your assigned position. Summarize and synthesize the best arguments for both points of view. Reach consensus on a

position that is supported by the facts. Change your mind only when the facts and rationale clearly indicate that you should do so.

- a. Write a group report with the supporting evidence and rationale for the synthesis your group has agreed on. Often the resulting position is a third perspective or synthesis that is more rational than the two assigned. All group members sign the report when it is as good as they can make it, indicating that they agree with it, can explain its content, and consider it ready to be evaluated. Organize your report to present it to your entire class.
- b. Take a test on both positions. If all members score above the preset criteria of excellence, each receives five bonus points.
- c. Process how well the group functioned and how their performance may be improved during the next controversy. Teachers may wish to structure the group processing to highlight the specific conflict management skills students need to master.

In addition to explaining the procedure, you may wish to help the students get into their roles by presenting the issue to be decided in as interesting and dramatic a way as possible.

**You specify the social skills students are to master and demonstrate during the controversy.** The social skills emphasized are those involved in systematically advocating an intellectual position and evaluating and criticizing the position advocated by others, as well as the skills involved in synthesis and consensual decision making. Students should be taught the following skills.

1. Emphasize the mutuality of the situation and avoid win-lose dynamics. Focus on coming to the best decision possible, not on winning.

2. Confirm others' competence while disagreeing with their positions and challenging their reasoning. Be critical of ideas, not people. Challenge and refute the ideas of the members of the opposing pair, but do not reject them personally.
3. Separate your personal worth from criticism of your ideas.
4. Listen to everyone's ideas, even if you do not agree with them.
5. First bring out the all the ideas and facts supporting both sides and then try to put them together in a way that makes sense. Be able to differentiate the differences between positions before attempting to integrate ideas.
6. Be able to take the opposing perspective in order to understand the opposing position. Try to understand both sides of the issue.
7. Change your mind when the evidence clearly indicates that you should.
8. Paraphrase what someone has said if it is not clear.
9. Emphasize rationality in seeking the best possible answer, given the available data.
10. Follow the *golden rule of conflict*. The golden rule is, act towards your opponents as you would have them act toward you. If you want people to listen to you, then listen to them. If you want others to include your ideas in their thinking, then include their ideas in your thinking. If you want others to take your perspective, then take their perspective.

**You structure intergroup cooperation.** You explain that when preparing their positions, students can check with classmates in other groups who are also preparing the same position. Ideas as to how best to present and advocate the position can be shared. If one pair of students finds information that supports its position, members can share that information with other pairs who have the same position. The more conferring between

pairs of students, the better. The positive outcomes found with a cooperative learning group can be extended throughout a whole class by structuring intergroup cooperation. Bonus points may be given if all members of a class reach a preset criteria of excellence. When a group finishes its work, the teacher should encourage the members to go help other groups complete the assignment.

### **Monitor The Controversy Groups And Intervention When Needed**

You monitor group members to see what problems they are having completing the assignment and skillfully engaging in the controversy procedure. Use a formal observation sheet whenever possible and count the number of times you observe appropriate behaviors being used by students. The more concrete the data, the more useful it is. You may also wish to take notes on specific student actions to illustrate and extend the frequency data. In monitoring the learning groups as they work, you may wish to clarify instructions, review important concepts and strategies, answer questions, and teach academic skills as necessary. Students may need assistance at any stage of the controversy procedure, whether it is researching their position, advocating it, refuting the opposing position, defending their position from attack, reversing perspectives, or creatively synthesizing.

**You intervene in the groups to teach students controversy skills.** While monitoring learning groups, you may find (a) students who do not have the necessary conflict skills and (b) groups where members are having problems in disagreeing effectively. In these cases, you intervene to suggest more effective procedures for working together and more effective behaviors. Basic interpersonal and small group skills may be directly taught (Johnson, 1993; Johnson & F. Johnson, 1994). You may

also wish to intervene and reinforce particularly effective and skillful behaviors that you notice. You become a consultant to a group in order to help it function more effectively.

### **Evaluating Students' Learning And Processing Group Effectiveness**

At the end of each instructional unit, students should be able to summarize what they have learned. You may wish to summarize the major points in the lesson, ask students to recall ideas or give examples, and answer any final questions students have. You evaluate students' work and give feedback as to how their work compares with the criteria of excellence. Qualitative as well as quantitative aspects of performance may be addressed. Students receive a group grade on the quality of their final report and receive an individual grade on their performance on the test covering both sides of the issue.

**You have groups process how well the group functioned.** Students should have time to describe what member actions were helpful (and unhelpful) in completing the group's work and make decisions about what behaviors to continue or change. Group processing occurs at two levels—in each learning group and in the class as a whole. In small group processing members discuss how effectively they worked together and what could be improved. In whole-class processing the teacher gives the class feedback and has students share incidents that occurred in their groups.

### **What Academic Controversy Is Not**

There is often misunderstandings about conducting an academic controversy and dealing with controversial issues and controversial subject matter in the classroom. A *controversial issue* is an issue for which society has not found consensus, and is considered so significant that each proposed way of dealing with the issue has ardent supporters and adamant opponents. Controversial issues, by nature, arouse protest from



some individual or group, since any position taken will be opposed by those who favor another position. The protest may result from a feeling that a cherished belief, an economic interest or a basic principle is threatened. Academic controversy is aimed at learning, not at resolving political issues within a community.

Second, in many places there are parents who are concerned about certain curriculum materials and topics for study. *Controversial subject matter* varies from college to college and community to community. Any issue or topic has the potential to become controversial at some time or place. Academic controversy is a procedure for learning, not for handling specific subject matter, curriculum materials, or topics.

Academic controversies create interest in subject matter and motivate students to investigate issues and points-of-view they would not ordinarily be interested in. Controversial issues and subject matter are just the opposite. They involve issues that students may be so emotionally involved in and feel so strongly about that a rational discussion is difficult. When unplanned and/or highly emotionally charged issues arise in a class, however, faculty need a procedure and plan for dealing with them.

### **Learning How To Be A Citizen In A Democracy**

The word "democracy" comes from the Greek word *demokratia*, which is a combination of *demos* (the Greek word for people) and *kratos* (the Greek word for "rule"). One admirer of Athenian democracy was Thomas Jefferson. Jefferson believed that free and open discussion should serve as the basis of influence within society, not the social rank within which a person was born. Jefferson was also influenced by one of his professors at William and Mary College, Dr. William Small of Scotland. Small advocated a new method of learning in which students questioned and discussed,

examining all sides of a topic, with scant regard for the pronouncements of established authorities. A few years before his death, Thomas Jefferson described his experiences as a student at the College of William and Mary in a letter to Dr. Thomas Cooper (1818): *I was bold in the pursuit of knowledge, never fearing to follow the truth and reason to whatever results they led, and bearding every authority which stood in the way.*

Based on the beliefs of Thomas Jefferson and his fellow revolutionaries, American democracy was founded on the premise that truth will result from free and open discussion in which opposing points of view are advocated and vigorously argued. Every citizen is given the opportunity to advocate for his or her ideas. Once a decision is made, the minority is expected to go along willingly with the majority because they know they have been given a fair and complete hearing. To be a citizen in our democracy, individuals need to master the process of organizing their conclusions, advocating their views, challenging opposing positions, making a decision, and committing themselves to implement the decision made (regardless of whether one initially favored the alternative adopted or not).

### **Building A Learning Community**

Students have to learn how to be contributing members to a learning community in order to achieve the goals of the college and to prepare themselves for most careers where group decision making is an everyday occurrence. For classes and colleges to be learning communities, these steps must be taken.

**The first step in creating a learning community is creating positive interdependence among all members of the class or college.** The easiest way to create such a cooperative context and a learning community is to use cooperative learning

procedures the majority of the day (Johnson, Johnson, & Smith, 1991). From making learning a cooperative effort, faculty may establish the mutual goal of searching for truth and knowledge and build commitment to achieving it. Increasing knowledge and understanding is achieved through cooperative interaction, not isolated thought. Truth and knowledge are consensual, based on intersubjectivity where different individuals reach the same conclusions and make the same inferences after considering theory and facts.

**The second step is to make intellectual conflict a way of life.** Faculty need to engage students in intellectual conflicts within which they have to prepare intellectual positions, present them, advocate them, criticize opposing intellectual positions, view the issue from a variety of perspectives, and synthesize the various positions into one position. Without intellectual conflict, a learning community in which faculty and students seek truth and knowledge cannot be achieved.

**The third step is to make the epistemology and pedagogy used congruent with the need for joint action toward mutual goals and the continued presence of intellectual conflict.** The epistemology resulting from (a) a competitive context in which students are ranked from highest to lowest performer and (b) making students passive recipients of lectures and reading mitigates against the formation of a learning community. Developing a learning community requires an epistemology based on the predominant use of cooperative learning and academic controversies. Since cooperative learning increases achievement, committed and caring relationships, increased social competencies, and a number of other important instructional outcomes (Johnson & Johnson, 1989), there will be little objection to making it the dominant mode of learning. In addition to cooperative learning, faculty use academic controversies to create the

intellectual conflict and internal disequilibrium needed to increase student critical thinking and use of higher-level reasoning strategies. Finding consensual truth requires mutual commitment to do so and intellectual disagreement and challenge. The combination of cooperative learning and academic controversies makes the epistemology and pedagogy congruent with faculty and students working together to accomplish mutual goals and engaging in continual intellectual conflict. These two instructional procedures thereby promote the creation of a true learning community.

**The fourth step is to establish a peer mediation program** (see Johnson & Johnson, 1995b). In a learning community, intellectual conflict is not the only type of conflict that arises. A *conflict of interests* exists when the actions of one person attempting to maximize his or her wants and benefits prevents, blocks, or interferes with another person maximizing his or her wants and benefits. When two students both want the same library book or want to use the computer at the same time, a conflict of interests exists. Conflicts among interests deal more with wants, needs, values, and goals than with differences in information and conclusions. Maintaining a learning community requires members to manage their conflicts of interests constructively. Doing so involves training students how to (a) negotiate constructive resolutions to their conflicts-of-interests and (b) mediate the conflicts-of-interests occurring among fellow students. When conflicts among interests occur, settlements must be negotiated. Students, therefore, have to be taught the procedures and skills of negotiating. When students are unable to negotiate an acceptable agreement, they will turn to a mediator for help. *Mediation* exists when a neutral third person--a mediator--intervenes to help resolve a conflict between two or more people in a way that is acceptable to them. A mediator listens carefully to both sides and helps the disputants move effectively through each step

of the negotiation sequence in order to reach an agreement that both believe is fair, just, and workable. Many colleges have implemented peer mediation programs. The procedures for doing so are described in Johnson and Johnson (1991). Doing so provides the framework for ensuring that good relationships are maintained among community members.

### **Summary And Conclusions**

Thomas Jefferson based his faith in the future on the power of constructive conflict. There are numerous theorists who have advocated the use of intellectual conflict in instructional situations. There has been a reluctance to do so, perhaps due to a cultural fear of conflict, lack of procedures, and cultural and pedagogical norms discouraging the use of conflict. In order to avoid students engaging in closed-minded attempts to win in answering the academic questions, instructors must structure the learning situation in ways that promote interest, curiosity, inquiry, and open-minded problem solving. To do so instructors must use two interrelated instructional procedures: cooperative learning and academic controversy. Academic controversy provides a clear procedure for faculty to use in promoting intellectual conflicts. There is strong research support indicating that academic controversy results in many positive benefits for students, including higher achievement, more positive relationships with classmates, and increased self-esteem. There is a clear theory as to the process by which controversy works that has been validated by numerous research studies. In well structured controversies, students make an initial judgment, present their conclusions to other group members, are challenged with opposing views, become uncertain about the correctness of their views, actively search for new information and understanding, incorporate others' perspectives and reasoning into their thinking, and reach a new set of conclusions. Controversies tend to

be constructive when the situational context is cooperative, group members are heterogeneous, information and expertise is distributed within the group, members have the necessary conflict skills, and the canons of rational argumentation are followed.

While the controversy process sometimes occurs naturally, it may be considerably enhanced when instructors structure academic controversies. This involves dividing a cooperative group into two pairs and assigning them opposing positions. The pairs then develop their position, present it to the other pair, listen to the opposing position, engage in a discussion in which they attempt to refute the other side and rebut attacks on their position, reverse perspectives and present the other position, and then drop all advocacy and seek a synthesis that takes both perspectives and positions into account. More specifically, the instructor's role in conducting an academic controversy involves making a number of pre-instructional decisions and preparations, explaining and orchestrating the task and cooperative structure and the controversy procedure, monitoring students' teamwork and taskwork and engagement in the controversy procedure, and evaluate students' achievement and having the group's process how effectively they functioned.

Academic controversies may be used in any subject area. Yet implementing structured academic controversies is not easy. It can take years to become an expert. Instructors may wish to start small by taking one subject area or one class and using controversy procedures until they feel comfortable, and then expand into other subject areas or other classes. Instructors are well-advised to pick out topics for which they are pretty sure a controversy will work, plan carefully, and do not rush the process. In order to implement academic controversies successfully, instructors will need to teach students the interpersonal and small group skills required to cooperate, engage in intellectual inquiry, intellectually challenge each other, see a situation from several perspective simultaneously, and

synthesize a variety of positions into a new and creative decision. Instructors will also want to teach students the academic skills of researching a position, conceptualizing and organizing an intellectual position, using inductive and deductive logic, presenting a scholarly and reasoned position, refuting other's positions, rebutting attacks on one's own position, and integrating information and reasoning from different perspectives and positions.

Walter Savage Landor once said, *"There is no more certain sign of a narrow mind, of stupidity, and of arrogance, than to stand aloof from those who think differently from us."* It is vital for citizens to seek reasoned judgment on the complex problems facing our society. Especially important is educating individuals to solve problems for which different points of view can plausibly be developed. To do so individuals must enter empathetically into the arguments of both sides of the issue and ensure that the strongest possible case is made for each side, and arrive at a synthesis based on rational thought. Structured academic controversies are now being used in numerous elementary, secondary, and college classrooms. From academic units on the relative merits of coal or nuclear power in elementary classrooms to units on hazardous waste management within high school and college classes, individuals are learning how to utilize structured controversy to address the great questions of our (and previous) times and ensure that high quality solutions are found to complex problems.

## References

- Ames G., & Murray, F. “When two wrongs make a right: Promoting cognitive change by social conflict,” in *Developmental Psychology*, 18, 894-897, 1982.
- Berlyne, D. “Notes on intrinsic motivation and intrinsic reward in relation to instruction,” In J. Bruner (Ed.), *Learning about learning* (Cooperative Research Monograph No. 15). Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, 1966.
- Bruner, J. *The process of education*. Cambridge, MA: Harvard University Press, 1961.
- Coser, L. *The function of social conflict*. Glencoe, IL: Free Press, 1956.
- Deutsch, M. Cooperation and trust: Some theoretical notes. In M. Jones (Ed.), *Nebraska symposium on motivation*, 275-319. Lincoln, NE: University of Nebraska Press, 1962.
- Deutsch, M. *The resolution of conflict*. New Haven, CT: Yale University Press, 1973.
- Follet, M. “Constructive conflict,” In H. Metcalf & L. Urwick (Eds.), *Dynamic administration: The collected papers of Mary Parker Follet* (pp. 30-49). New York: Harper, 1940.
- Hammond, K. “New directions in research on conflict resolution,” in *Journal of Social Issues*, 11, 44-66, 1965.
- Hoffman, L., & Maier, N. “Sex differences, sex composition, and group problem solving,” in *Journal of Abnormal and Social Psychology*, 63, 453-456, 1961.
- Hunt, J. “Introduction: Revisiting Montessori,” In M. Montessori (Ed.), *The Montessori method*. New York: Schocken Books, 1964.
- Janis, I. *Groupthink: Psychological studies of policy decisions and fiascoes*. Boston, MA: Houghton-Mifflin, 1982.



- Johnson, D. W. *Social psychology of education*. Edina, MN: Interaction Book Company, 1970.
- Johnson, D. W. *Educational psychology*. Englewood Cliffs, NJ: Prentice-Hall, 1979.
- Johnson, D. W. "Group processes: Influences of student-student interaction on school outcomes," In J. McMillam (Ed.), *The social psychology of school learning*. New York: Academic Press, 1980.
- Johnson, D. W. *Reaching out: Interpersonal effectiveness and self-actualization* (5th ed.). Englewood Cliff, NJ: Prentice-Hal, 1973/1994.
- Johnson D. W., & Johnson, F. *Joining together: Group theory and group skills* (5th ed.). Englewood Cliffs, NJ: Prentice-Hall, 1975/1994.
- Johnson, D. W., Johnson, F., & Johnson, R. "Promoting constructive conflict in the classroom," in *Notre Dame Journal of Education*, 7, 163-168, 1976.
- Johnson, D. W., & Johnson, R. "Conflict in the classroom: Controversy and learning," in *Review of Educational Research*, 49, 51-61, 1979.
- Johnson, D. W., & Johnson, R. "Classroom conflict: Controversy versus debate in learning groups," in *American Educational Research Journal*, 22, 237-256, 1985.
- Johnson, D. W., & Johnson, R. "Critical thinking through structured controversy," in *Educational Leadership*, 58-64, March, 1988.
- Johnson, D. W., & Johnson, R. *Teaching students to manage conflict constructively by involving them in academic controversies*. Paper given at the annual meetings of American Association for the Advancement of Science, February, 1988.
- Johnson, D. W., & Johnson, R. *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book Company, 1989.

- Johnson, D. W., & Johnson, R. *Creative Controversy: Intellectual challenge in the classroom*. Edina, MN: Interaction Book Company, 1995a.
- Johnson, D. W., & Johnson, R. *Teaching students to be peacemakers*. Edina, MN: Interaction Book Company, 1995b.
- Johnson, D. W., Johnson, R., & Holubec, E. *Circles of learning: Cooperation in the classroom* (3rd Ed.). Edina, MN: Interaction Book Company, 1993.
- Johnson, D. W., Johnson, R., & Smith, K. “Academic conflict among students: Controversy and Learning,” In R. Feldman, (Ed.). *Social psychological applications to education*. Cambridge University Press, 1986.
- Johnson, D. W., Johnson, R., & Smith, K. “Controversy within decision-making situations,” In M. Rahim (ed.), *Managing conflict: An interdisciplinary approach* (pp. 251-264). New York: Praeger, 1989.
- Johnson, D. W., Johnson, R., & Smith, K. *Active learning: cooperation in the college classroom*. Edina, MN: Interaction Book Company, 1991.
- Johnson, D. W., Johnson, R., Smith, K., & Tjosvold, D. “Pro, con, and synthesis: Training managers to engage in constructive controversy,” In Sheppard, B., Bazerman, M., & Lewicki, R. (eds.), *Research on negotiation in organizations, 2* (pp. 135-170). Greenwich, CT: JAI Press, 1990.
- Kohlberg, L. “Stage and sequence: The cognitive-developmental approach to socialization,” In D. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 347- 480). Chicago: Rand McNally, 1969.
- Maier, N. *Problem-solving and creativity in individuals and group*. Belmont, CA: Brooks/Cole, 1970.

- Palmer, P. "The courage to teach," in *National Teaching and Learning Forum*, 1(2), 1-3, 1991.
- Palmer, P. "Divided no more," in *Change*, (Mach/April), 11-17, 1992.
- Piaget, J. *The psychology of intelligence*. New York: Harcourt, 1950.
- Simmel, G. *Conflict*. New York: Free Press, 1955.
- Tjosvold, D. "Flight crew collaboration to manage safety risks," Unpublished manuscript, Simon Frazer University, in press.
- Tjosvold, D., & Johnson, D. W. (Eds.). *Productive Conflict Management: Perspectives for Organizations*. New York: Irvington, 1983.
- Watson, G., & Johnson, D. W. *Social psychology: issues and insights*. Philadelphia: Lippincott, 1972.