Cooperative Learning, Values, and Culturally Plural Classrooms

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**Diversity: Promise Or Problem?**

In the story, **Beauty and the Beast**, Beauty, to save her father’s life, agrees to live in an enchanted castle with the Beast. While very fearful of the Beast, and horrified by his appearance, she is able to look beyond his monstrous appearance into his heart. Considering his kind and generous nature, her perception of his appearance changed. She no longer was repelled by the way he looked but instead was drawn to his loving nature. The better she got to know him, the less monstrous he seemed. Finally, finding him dying of a broken heart, she reveals her love for him, which transforms the beast into a handsome prince. They not only lived happily ever after, but all those who stumbled into
their domain in despair were changed, finding on their departure that their hearts were now filled with goodness and beauty. This is an often repeated story. We are often repelled by those we do not know. Yet after they have become our friends, we do not understand how once they seemed monstrous to us. Nowhere is Beauty and the Beast more apparent than in schools. For it is in schools that diversity among individuals is most often faced and eventually valued. The diversity of students is increasing in most schools every year. The increased ease in transportation systems, the increased migration, and the dynamics of the world economy is resulting in many nations facing increased diversity in their society. Changes in the world economy, transportation, and communication are resulting in increased levels of interdependence among individuals, groups, organizations, communities, and societies. Students can be from many cultures, ethnic groups, language groups, and religions as well as from difference economic social classes and ability levels. Pluralism and diversity among individuals creates an opportunity, but like all opportunities, there are potentially either positive or negative outcomes. Diversity among students can result in increased achievement and productivity, creative problem solving, growth in cognitive and moral reasoning, increased perspective-taking ability, improved relationships, and general sophistication in interacting and working with peers from a variety of cultural and ethnic backgrounds (Johnson & Johnson, 1989). Or, diversity among students can lead to negative outcomes. Diversity can result in lower achievement, closed-minded rejection of new information, increased egocentrism, and negative relationships characterized by hostility, rejection, divisiveness, scapegoating, bullying, stereotyping, prejudice, and racism. Once diverse students are brought together in the same school, whether the diversity results in positive or negative outcomes depends largely on whether learning situations are structured competitively, individualistically, or cooperatively. Each type of interdependence teaches a set of values and creates patterns of interaction that result in diversity being valued or rejected. This chapter focuses on the use of cooperative learning to promote a culturally plural society within the school. The topics discussed are (a) the nature of each type of interdependence and the values implicit in each, (b) the types of cooperative learning,
(c) the basic elements essential for effective cooperation, (d) the research supporting the use of cooperative learning and verifying its positive influences on diversity, and (e) the implications of the theorizing and research on cooperation for diversity.

**Interdependence And Values**

The value systems underlying competitive, individualistic, and cooperative situations exist as a hidden curriculum beneath the surface of school life. This hidden values curriculum permeates the social and cognitive development of children, adolescents, and young adults. Each type of interdependence has a set of values inherently built into it and those values determine whether diversity is viewed as positive or negative.

**The Values Resulting From Competition**

When a situation is structured **competitively**, individuals work against each other to achieve a goal that only one or a few can attain (Johnson & Johnson, 1989). Individuals' goal achievements are negatively correlated; each individual perceives that when one person achieves his or her goal, all others with whom he or she is competitively linked fail to achieve their goals. Thus, individuals seek an outcome that is personally beneficial but detrimental to all others in the situation. Inherent in competition is a set of values that is taught and retaught whenever a person engages in competition. The values are:

1. Commitment to getting more than others. There is a built-in concern that one is smarter, faster, stronger, more competent, and more successful than others so that one will win and others will lose.
2. Success depends on beating, defeating, and getting more than other people. What is valued is triumphant over others and being Number One. Winning has little to do with excellence and may actually be opposed to excellence. Competition does not teach the value of excellence. Competition teaches the value of winning—doing better and getting more than other participants.
3. Opposing, obstructing, and sabotaging the success of others is a natural way of life. Winning depends on a good offense (doing better than others) and a good defense (not letting anyone do better than you). There are two ways to win—doing
better and obstructing others' efforts. A smart competitor will always find ways to oppose, obstruct, and sabotage the work of others in order to win.

4. The pleasure of winning is associated with others' disappointment with losing. Winners feel great about winning and they automatically feel great about other people losing. When someone loses, it is a source of pleasure and happiness because it means that one has a better chance of winning.

5. Other people are a threat to one's success. Because smart competitors will obstruct and sabotage the work of others, competitors are to be distrusted and watched closely because their efforts to win and their efforts to sabotage one's work are threats. Competition casts schoolmates as rivals and threats to one's success.

6. Other people's worth is contingent on their "wins." When a person wins, he or she has value. When a person loses, he or she has no value. The worth of a person is never fixed. It all depends on the latest victory. When a person stops winning he or she no longer has value as an individual. Competition places value on a limited number of qualities that facilitate winning. Thus, since only a very few people can win, most people have no value. In school, for example, if a person did not score in the top five or ten percent in math or reading on the last test, they have no or limited value academically. The other 95 to 90 percent of students are losers and have no value.

7. Self-worth is conditional and contingent on one's "wins." Competition teaches that self-worth is contingent on victories. When a person stops winning he or she stops having value as a person. Far from helping students to believe in themselves, competition creates perpetual insecurity.

8. Competitors value extrinsic motivation based on striving to win rather than striving to learn. Winning is the goal, not the learning or the practice or the
development. The inducement of trying to beat people, like other extrinsic motivators, has been shown to reduce students’ interest in the task itself.

9. People who are different from one are to be either feared or held in contempt. Other people are perceived to be potential obstacles to one’s success. If they are different in a way that gives them an advantage, the difference is feared. If they are different in a way that gives one an advantage over them, they are to be discounted. High performing students are often feared because they can win and low performing students are often held in contempt as losers who are no competition.

The Values Resulting From Individualistic Efforts

When a situation is structured individually, there is no correlation among participants’ goal attainments (Johnson & Johnson, 1989). Each individual perceives that he or she can reach his or her goal regardless of whether other individuals attain or do not attain their goals. Thus, individuals seek an outcome that is personally beneficial without concern for the outcomes of others. The values that individualistic experiences teach are:

1. Commitment to one’s own self-interest. One’s own success is viewed as important. Others’ success is considered to be irrelevant. There is a solitary calculation of personal self-interest. There is a built-in self-centeredness while ignoring the plight of others.

2. Success depends on one’s own efforts. What is valued is reaching some standard for success. Individualistic work teaches the value of independent efforts to succeed.

3. Other people’s success or failure is irrelevant and of no consequence.

4. The pleasure of succeeding is personal and isolated.

5. Other people are irrelevant to one’s success. Because their success or failure has no impact on oneself, others are avoided and seen as unrelated to one’s success.
6. Other people's worth is nonexistent because they are seen as irrelevant and no value to one's efforts to succeed. When others are evaluated, there is a unidimensional focus on the quality that most affects the success on a task (such as reading or math ability).
7. Self-worth is based on a unidimensional view of oneself. Only the characteristics that help the person succeed are valued. In school, that is primarily reading and math ability.
8. Individualistic experiences result in valuing extrinsic motivation based on achieving criteria and receiving rewards rather than striving to learn. Achieving up to a criterion is the goal, not the learning, practice, or development. The rewards received for success is the underlying motivator of learning.
9. People who are perceived to be different are disliked while people who are perceived to be similar are liked. Other people are perceived to be unnecessary and not relevant to one's success.

The Values Resulting From Cooperation

Cooperation is working together to accomplish shared goals (Johnson & Johnson, 1989). Within cooperative activities individuals seek outcomes that are beneficial to themselves and beneficial to all other group members. Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson, Johnson, & Holubec, 1993). Within cooperative learning groups students are given two responsibilities: To learn the assigned material and make sure that all other members of their group do likewise. In cooperative learning situations, students perceive that they can reach their learning goals only if the other students in the learning group also do so. The values inherent in cooperative efforts are:

1. Commitment to the common good. In cooperative situations, individuals' work contributes not only to their own well-being, but also to the well-being of all other collaborators. There is a built-in concern for the common good and the success of others, as the
efforts of others also contribute to one's own well-being.
2. Success depends on the joint efforts of everyone to achieve mutual goals. Since cooperators "sink or swim together," an "all for one and one for all" mentality is appropriate. What is valued is teamwork and civic responsibility. Succeeding depends on everyone doing his or her part. Cooperation teaches the value of working together to achieve mutual goals.
3. Facilitating, promoting, and encouraging the success of others is a natural way of life. Succeeding depends on everyone doing well. There are two ways to succeed: contributing all one can to the joint effort and promoting other cooperators' efforts to contribute. A smart cooperator will always find ways to promote, facilitate, and encourage the efforts of others.
4. The pleasure of succeeding is associated with others' happiness in their success. Cooperators feel great about succeeding and they automatically feel great about other people succeeding. When someone succeeds, it is a source of pleasure and happiness because it means that one's help and assistance has paid off.
5. Other people are potential contributors to one's success. Because smart cooperators will promote and facilitate the work of others, cooperators are to be trusted because their efforts to succeed will promote one's own success. Cooperation casts schoolmates as allies, colleagues, and friends who will contribute to one's success.
6. Other people's worth is unconditional. Because there are so many diverse ways that a person may contribute to a joint effort, everyone has value all the time. This inherent value is reaffirmed by working for the success of all. Cooperation places value on a wide range of diverse qualities that facilitate joint success. Thus, everyone has value.
7. Self-worth is unconditional. Cooperation teaches
that self-worth results from contributing whatever resources one has to the joint effort and common good. A person never loses value. Cooperative experiences result in individuals believing in themselves and their worth.

8. Cooperators value intrinsic motivation based on striving to learn, grow, develop, and succeed. Learning is the goal, not winning. The inducement of trying to contribute to the common good, like other intrinsic motivators, increases students' interest in the task itself.

9. People who are different from oneself are to be valued. Other people are perceived to be potential resources for and contributors to one's success. If they are different that means more diverse resources are available for the joint effort and, therefore, the difference is valued. The diverse contributions of members results in the realization that, in the long run, everyone is of equal value and equally deserving, regardless of their gender, ethnic membership, culture, social class, or ability.

**Summary**

There are three types of social interdependence: Positive (cooperation), negative (competition), and none (individualistic efforts). Each type of interdependence teaches an inherent set of values. These values influence whether diversity results in positive or negative outcomes. This does not mean, however, that competitive and individualistic efforts should be banned in schools. Students should learn how to compete appropriately for fun and enjoyment, work individualistically on their own, and work cooperatively as part of teams. Cooperative learning, however, should be used the majority of the school day, as it is cooperative experiences that promote the most desirable values for the future well-being of students and the future well-being of society.

**Nature Of Cooperative Learning**

"Two are better than one, because they have a good reward for toil. For if they fall, one will lift up his fellow; but woe to him who is alone when he falls and has not another to lift him up...And though a man might prevail against one who is alone, two will withstand him. A threefold cord is not quickly broken."
Ecclesiastics 4:9-12

History Of Cooperative Learning

Cooperative learning is an old idea. The Talmud clearly states that in order to learn you must have a learning partner. In the first century, Quintillian argued that students could benefit from teaching one another. The Roman philosopher, Seneca advocated cooperative learning through such statements as, “Qui Docet Discet” (when you teach, you learn twice). Johann Amos Comenius (1592-1679) believed that students would benefit both by teaching and being taught by other students. In the late 1700s Joseph Lancaster and Andrew Bell made extensive use of cooperative learning groups in England, and the idea was brought to America when a Lancastrian school was opened in New York City in 1806. Within the Common School Movement in the United States in the early 1800s there was a strong emphasis on cooperative learning. In the last three decades of the 19th Century, Colonel Francis Parker brought to his advocacy of cooperative learning enthusiasm, idealism, practicality, and an intense devotion to freedom, democracy, and individuality in the public schools. His fame and success rested on his power to create a classroom atmosphere that was truly cooperative and democratic. Parker’s advocacy of cooperation among students dominated American education through the turn of the century. Following Parker, John Dewey promoted the use of cooperative learning groups as part of his famous project method in instruction. In the late 1930’s, however, interpersonal competition began to be emphasized in schools and in the late 1960s, individualistic learning began to be used extensively. In the 1980s, schools once again began to use cooperative learning.

Types Of Cooperative Learning

Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson, Johnson, & Holubec, 1993). Within cooperative learning groups students discuss the material to be learned with each other, help and assist each other to understand it, and encourage each other to work hard. Cooperative learning groups may be used to teach specific content (formal cooperative learning groups), to ensure active cognitive processing of information during a lecture or demonstration (informal cooperative learning groups), and to provide
long-term support and assistance for academic progress *(cooperative base groups)* (Johnson, Johnson, & Holubec, 1993). Any assignment in any curriculum for any age student can be done cooperatively.

**Formal cooperative learning** is students working together, for one class period to several weeks, to achieve shared learning goals and complete jointly specific tasks and assignments (such as decision making or problem solving, completing a curriculum unit, writing a report, conducting a survey or experiment, or reading a chapter or reference book, learning vocabulary, or answering questions at the end of the chapter) (Johnson, Johnson, & Holubec, 1993). Any course requirement or assignment may be reformulated to be cooperative. In formal cooperative learning groups teachers:

1. **Specify the objectives for the lesson.** In every lesson there should be an academic objective specifying the concepts and strategies to be learned and a social skills objective specifying the interpersonal or small group skill to be used and mastered during the lesson.
2. **Make a number of preinstructional decisions.** A teacher has to decide on the size of groups, the method of assigning students to groups, the roles students will be assigned, the materials needed to conduct the lesson, and the way the room will be arranged.
3. **Explain the task and the positive interdependence.** A teacher clearly defines the assignment, teaches the required concepts and strategies, specifies the positive interdependence and individual accountability, gives the criteria for success, and explains the expected social skills to be engaged in.
4. **Monitor students’ learning and intervene within the groups to provide task assistance or to increase students' interpersonal and group skills.** A teacher systematically observes and collects data on each group as it works. When it is needed, the teacher intervenes to assist students in completing the task accurately and in working together effectively.
5. **Assess students’ learning and helping students process how well their groups functioned.** Students’ learning is carefully assessed and their
performances are evaluated. Members of the learning groups then process how effectively they have been working together.

**Informal cooperative learning** consists of having students work together to achieve a joint learning goal in temporary, ad-hoc groups that last from a few minutes to one class period (Johnson, Johnson, & Holubec, 1992; Johnson, Johnson, & Smith, 1991). During a lecture, demonstration, or film, informal cooperative learning can be used to (a) focus student attention on the material to be learned, (b) set a mood conducive to learning, (c) help set expectations as to what will be covered in a class session, (d) ensure that students cognitively process the material being taught, and (e) provide closure to an instructional session. During direct teaching the instructional challenge for the teacher is to ensure that students do the intellectual work of organizing material, explaining it, summarizing it, and integrating it into existing conceptual structures. Informal cooperative learning groups are often organized so that students engaged in three-to-five minute focused discussions before and after a lecture and two-to-three minute turn-to-your-partner discussions interspersed throughout a lecture.

**Cooperative base groups** are long-term, heterogeneous cooperative learning groups with stable membership (Johnson, Johnson, & Holubec, 1992; Johnson, Johnson, & Smith, 1991). The purposes of the base group are to give the support, help, encouragement, and assistance each member needs to make academic progress (attend class, complete all assignments, learn) and develop cognitively and socially in healthy ways. Base groups meet daily in elementary school and twice a week in secondary school (or whenever the class meets). They are permanent (lasting from one to several years) and provide the long-term caring peer relationships necessary to influence members consistently to work hard in school. They formally meet to discuss the academic progress of each member, provide help and assistance to each other, and verify that each member is completing assignments and progressing satisfactorily through the academic program. Base groups may also be responsible for letting absent group members know what went on in class when they miss a session. Informally, members interact every day.
within and between classes, discussing assignments, and helping each other with homework. The use of base groups tends to improve attendance, personalize the work required and the school experience, and improve the quality and quantity of learning. The larger the class or school and the more complex and difficult the subject matter, the more important it is to have base groups. Base groups are also helpful in structuring homerooms and when a teacher meets with a number of advises.

**The Cooperative School**

In addition to structuring classroom work cooperatively, school administrators may structure teachers into cooperative teams. There are three types of cooperative teams within a school (Johnson & Johnson, 1994). **Collegial teaching teams** are formed to increase teachers' instructional expertise and success. They consist of two to five teachers who meet weekly and discuss how better to implement cooperative learning within their classrooms. Teachers are assigned to **task forces** to plan and implement solutions to school-wide issues and problems such as curriculum adoptions and lunchroom behavior. **Ad hoc decision-making groups** are used during faculty meetings to involve all staff members in important school decisions. The use of cooperative teams at the building level ensures that there is a congruent cooperative team-based organizational structure within both classrooms and the school. Finally, the superintendent uses the same types of cooperative teams to maximize the productivity of district administrators.

**Basic Elements Of Cooperation**

Many teachers believe that they are implementing cooperative learning when in fact they are missing its essence. Putting students into groups to learn is not the same thing as structuring cooperation among students. Cooperation is **not**:

1. Having students sit side by side at the same table and talk with each other as they do their individual assignments.
2. Having students do a task individually with instructions that the ones who finish first are to help the slower students.
3. Assigning a report to a group where one student does all the work and others put their name on it.

Cooperation is much more than being physically near other
students, discussing material with other students, helping other students, or sharing materials with other students, although each of these is important in cooperative learning.

In order for a lesson to be cooperative, five basic elements are essential and need to be included (Johnson & Johnson, 1989; Johnson, Johnson, & Holubec, 1993). The five essential elements are as follows.

1. **Positive Interdependence**: Positive interdependence is the perception that you are linked with others in a way so that you cannot succeed unless they do (and vice versa), that is, their work benefits you and your work benefits them. It promotes a situation in which students work together in small groups to maximize the learning of all members, sharing their resources, providing mutual support, and celebrating their joint success. Positive interdependence is the heart of cooperative learning. Students must believe that they sink or swim together. Within every cooperative lesson positive goal interdependence must be established through **mutual learning goals** (learn the assigned material and make sure that all members of your group learn the assigned material). In order to strengthen positive interdependence, **joint rewards** (if all members of your group score 90 percent correct or better on the test, each will receive 5 bonus points), **divided resources** (giving each group member a part of the total information required to complete an assignment), and **complementary roles** (reader, checker, encourager, elaborator) may also be used. For a learning situation to be cooperative, students must perceive that they are positively interdependent with other members of their learning group. It is positive interdependence that creates the overall superordinate goals that unite diverse students into a common effort. It is also positive interdependence that results in a joint superordinate identity. Students need to develop a unique identity as an individual, a social identity based among other things on their ethnic, historical, and cultural background, and a superordinate identity that unites them with all the other members of their society. At the same time they need to understand the social identity of classmates and respect them as collaborators and friends. It is positive interdependence, furthermore, that underlies a common culture that defines the values and nature of the society in which the students live.
2. **Individual Accountability**: Individual accountability exists when the performance of each individual student is assessed and the results are given back to the group and the individual. It is important that the group knows who needs more assistance, support, and encouragement in completing the assignment. It is also important that group members know that they cannot "hitch-hike" on the work of others. The purpose of cooperative learning groups is to make each member a stronger individual in his or her right. Students learn together so that they can subsequently perform higher as individuals. To ensure that each member is strengthened, students are held individually accountable to do their share of the work. Common ways to structure individual accountability include (a) giving an individual test to each student, (b) randomly selecting one student's product to represent the entire group, or (c) having each student explain what they have learned to a classmate.

3. **Face-To-Face Promotive Interaction**: Once teachers establish positive interdependence, they need to maximize the opportunity for students to promote each other's success by helping, assisting, supporting, encouraging, and praising each other's efforts to learn. There are cognitive activities and interpersonal dynamics that only occur when students get involved in promoting each other's learning. This includes orally explaining how to solve problems, discussing the nature of the concepts being learned, teaching one's knowledge to classmates, and connecting present with past learning. Accountability to peers, ability to influence each other's reasoning and conclusions, social modeling, social support, and interpersonal rewards all increase as the face-to-face interaction among group members increase. In addition, the verbal and nonverbal responses of other group members provide important information concerning a student's performance. Silent students are uninvolved students who are not contributing to the learning of others as well as themselves. Promoting each other's success results in both higher achievement and in getting to know each other on a personal as well as a professional level. To obtain meaningful face-to-face interaction the size of groups needs to be small (2 to 4 members). Finally, while positive interdependence creates the conditions for working together, it is the actual face-to-face interaction in which students work together and promote each
other is success that the personal relationships are formed that are essential for developing pluralistic values.

4. **Social Skills:** Contributing to the success of a cooperative effort requires interpersonal and small group skills. Placing socially unskilled individuals in a group and telling them to cooperate does not guarantee that they will be able to do so effectively. Persons must be taught the social skills for high quality cooperation and be motivated to use them. Leadership, decision-making, trust-building, communication, and conflict-management skills have to be taught just as purposefully and precisely as academic skills. Procedures and strategies for teaching students social skills may be found in Johnson (1991, 1997) and Johnson and F. Johnson (1997). Finally, social skills are required for interacting effectively with peers from other cultures and ethnic groups.

5. **Group Processing:** Group processing exists when group members discuss how well they are achieving their goals and maintaining effective working relationships. Groups need to describe what member actions are helpful and unhelpful and make decisions about what behaviors to continue or change. Students must also be given the time and procedures for analyzing how well their learning groups are functioning and the extent to which students are employing their social skills to help all group members to achieve and to maintain effective working relationships within the group. Such processing (a) enables learning groups to focus on group maintenance, (b) facilitates the learning of social skills, (c) ensures that members receive feedback on their participation, and (d) reminds students to practice collaborative skills consistently. Some of the keys to successful processing are allowing sufficient time for it to take place, making it specific rather than vague, maintaining student involvement in processing, reminding students to use their social skills while they process, and ensuring that clear expectations as to the purpose of processing have been communicated. Finally, when difficulties in relating to each other arise, students must engage in group processing and identity, define, and solve the problems they are having working together effectively.

In order to effectively use cooperative learning teachers must understand the nature of cooperation and the essential components of a well-structured cooperative lesson.
Understanding what positive interdependence, promotive interaction, individual accountability, social skills and group processing are, and developing skills in structuring them, allow teachers to (a) adapt cooperative learning to their unique circumstances, needs, and students and (b) fine-tune their use of cooperative learning to solve problems students are having in working together.

What Do We Know About Cooperative Efforts?

Everyone has to work together; if we can't get everybody working toward common goals, nothing is going to happen.

Harold K. Sperlich, President, Chrysler Corporation

Learning together to complete assignments can have profound effects on students. A great deal of research has been conducted comparing the relative effects of cooperative, competitive, and individualistic efforts on instructional outcomes. These research studies began in the late 1800s but the field did not gain momentum until the 1940s when Morton Deutsch, building on the theorizing of Kurt Lewin, proposed a theory of cooperation and competition. His theory has served as the primary foundation on which subsequent research and discussion of cooperative learning has been based. During the past 90 years over 550 experimental and 100 correlational studies have been conducted by a wide variety of researchers in different decades with different age subjects, in different subject areas, and in different settings (see Johnson & Johnson, 1989 for a complete listing and review of these studies).

Building on the theorizing of Kurt Lewin and Morton Deutsch, the premise may be made that the type of interdependence structured among students determines how they interact with each other which, in turn largely determines instructional outcomes. Structuring situations cooperatively results in students interacting in ways that promote each other's success, structuring situations competitively results in students interacting in ways that oppose each other's success, and structuring situations individualistically results in no interaction among students. Students can help, assist, support, and encourage each other's efforts to learn. Students can obstruct and block each other's efforts to learn. Or students can ignore each other and work alone. These interaction patterns affect numerous variables, which may be subsumed within the three broad and interrelated
outcomes of effort exerted to achieve, quality of relationships among participants, and participants’ psychological adjustment and social competence (see Figure 1) (Johnson & Johnson, 1989).

**Table 1 Social Interdependence Theory**

<table>
<thead>
<tr>
<th>Process</th>
<th>Cooperative</th>
<th>Competitive</th>
<th>Individualistic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interdependence</strong></td>
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<td>Negative</td>
<td>None</td>
</tr>
<tr>
<td><strong>Interaction Pattern</strong></td>
<td>Promotive</td>
<td>Oppositional</td>
<td>None</td>
</tr>
<tr>
<td><strong>Outcome 1</strong></td>
<td>High Effort To Achieve</td>
<td>Low Effort To Achieve</td>
<td>Low Effort To Achieve</td>
</tr>
<tr>
<td><strong>Outcome 2</strong></td>
<td>Positive Relationships</td>
<td>Negative Relationships</td>
<td>No Relationships</td>
</tr>
<tr>
<td><strong>Outcome 3</strong></td>
<td>Psychological Health</td>
<td>Psychological Illness</td>
<td>Psychological Pathology</td>
</tr>
</tbody>
</table>

**Achievement**

Over 375 studies have been conducted over the past 90 years to give an answer to the question of how successful competitive, individualistic, and cooperative efforts are in promoting productivity and achievement (see Table 1) (Johnson & Johnson, 1989). Working together to achieve a common goal produces higher achievement and greater productivity than does working alone. This is so well confirmed by so much research that it stands as one of the strongest principles of social and organizational psychology. Cooperative learning, furthermore, resulted in more higher-level reasoning, more frequent generation of new ideas and solutions (i.e., **process gain**), and greater transfer of what is learned within one situation to another (i.e., **group to individual transfer**) than did competitive or individualistic learning. The more conceptual the task, the more problem solving required, the more desirable higher-level reasoning and critical thinking, the more creativity required, and the greater the application required of what is being learned to the real world, the greater the superiority of cooperative over competitive and individualistic efforts. Some cooperative learning procedures contained a mixture of cooperative, competitive, and individualistic efforts while others
were "pure." The original jigsaw procedure (Aronson, 1978), for example, is a combination of resource interdependence (cooperative) and individual reward structure (individualistic). Teams-Games-Tournaments (DeVries & Edwards, 1974) and Student-Teams-Achievement-Divisions (Slavin, 1986) are mixtures of cooperation and intergroup competition. Team-Assisted-Instruction (Slavin, 1986) is a mixture of individualistic and cooperative learning. When the results of "pure" and "mixed" operationalizations of cooperative learning were compared, the "pure" operationalizations produced higher achievement. Differences among individuals in personality, sex, attitudes, background, social class, reasoning strategies, cognitive perspectives, information, ability levels, and skills have been found to promote achievement and productivity (see Johnson & Johnson, 1989).

**Interpersonal Relationships**

"A faithful friend is a strong defense, and he that hath found him, hath found a treasure."

Ecclesiastics 6:14

**Individuals care more about each other and are more committed to each other's success and well-being when they work together to get the job done than when they compete to see who is best or work independently from each other.** This is true when individuals are homogeneous and it is also true when individuals differ in intellectual ability, handicapping conditions, ethnic membership, social class, and gender. When individuals are heterogeneous, cooperating on a task results in more realistic and positive views of each other. As relationships become more positive, there are corresponding increases in productivity, feelings of personal commitment and responsibility to do the assigned work, willingness to take on and persist in completing difficult tasks, morale, and commitment to peer's success and growth. Absenteeism and turnover of membership decreases.

There are 180 studies that have been conducted since 1940s on the relative impact of cooperative, competitive, and individualistic experiences on interpersonal attraction (Johnson & Johnson, 1989). The data indicate that cooperative experiences promote greater interpersonal attraction than do competitive or individualistic ones (effect sizes = 0.66 and 0.62 respectively).
The higher the quality of the study and the more pure the operationalization of cooperation, the stronger the impact of cooperation on interpersonal attraction. The positive relationships formed transfer to voluntary choice situations. Even when individuals initially dislike each other, cooperative experiences have been found to promote liking.

Much of the research on interpersonal relationships has been conducted on relationships between white and minority students and between nonhandicapped and handicapped students (Johnson & Johnson, 1989). There have been over 40 experimental studies comparing some combination of cooperative, competitive, and individualistic experiences on cross-ethnic relationships and over 40 similar studies on mainstreaming of handicapped students (Johnson & Johnson, 1989a). Their results are consistent. Working cooperatively creates far more positive relationships among diverse and heterogeneous students than does learning competitively or individualistically.

Once the relationship is established, the next question becomes "why?" The social judgments individuals make about each other increase or decrease the liking they feel towards each other. Such social judgments are the result of either a process of acceptance or a process of rejection (Johnson & Johnson, 1989).

**The process of acceptance** is based on the individuals promoting mutual goal accomplishment as a result of their perceived positive interdependence. The promotive interaction tends to result in frequent, accurate, and open communication; accurate understanding of each other's perspective; inducibility; differentiated, dynamic, and realistic views of each other; high self-esteem; success and productivity; and expectations for positive and productive future interaction. **The process of rejection** results from oppositional or no interaction based on perceptions of negative or no interdependence. Both lead to no or inaccurate communication; egocentrism; resistance to influence; monopolistic, stereotyped, and static views of others; low self-esteem; failure; and expectations of distasteful and unpleasant interaction with others. The processes of acceptance and rejection are self-perpetuating. Any part of the process tends to elicit all the other parts of the process. **Table 3**
### Processes Of Acceptance And Rejection

<table>
<thead>
<tr>
<th>Process Of Acceptance</th>
<th>Process Of Rejection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Interdependence</td>
<td>Negative Interdependence</td>
</tr>
<tr>
<td>Promotive Interaction</td>
<td>Oppositional Or No Interaction</td>
</tr>
<tr>
<td>Frequent &amp; Open Communication</td>
<td>No Or Inaccurate Communication</td>
</tr>
<tr>
<td>Understanding Of Other Perspectives</td>
<td>Egocentricism</td>
</tr>
<tr>
<td>Inducibility</td>
<td>Resistance To Influence</td>
</tr>
<tr>
<td>Differentiated Views Of Each Other</td>
<td>Monopolistic Views Of Each Other</td>
</tr>
<tr>
<td>High Self-Esteem</td>
<td>Low Self-Esteem</td>
</tr>
<tr>
<td>Successful Achievement, Productivity</td>
<td>Failure, Lack Of Productivity</td>
</tr>
<tr>
<td>Expectations Of Positive &amp; Productive Future Interaction With Others</td>
<td>Expectations Of Negative &amp; Unproductive Future Interaction With Others</td>
</tr>
</tbody>
</table>

### Psychological Health And Social Competence

Working cooperatively with peers, and valuing cooperation, results in greater psychological health and higher self-esteem than does competing with peers or working independently. Personal ego-strength, self-confidence, independence, and autonomy are all promoted by being involved in cooperative efforts with caring people, who are committed to each other's success and well-being, and who respect each other as separate and unique individuals. When individuals work together to complete assignments, they interact (mastering social skills and competencies), they promote each other's success (gaining self-worth), and they form personal as well as professional relationships (creating the basis for healthy social development). Individuals' psychological adjustment and health tend to increase when schools are dominated by cooperative efforts. The more individuals work cooperatively with
others, the more they see themselves as worthwhile and as having value, the greater their productivity, the greater their acceptance and support of others, and the more autonomous and independent they tend to be. A positive self-identity is developed basically within supportive, caring, cooperative relationships while a negative self-identity is developed within competitive, rejecting, or uncaring relationships. Children who are isolated usually develop the most self-rejecting identities. Cooperative experiences are not a luxury. They are an absolute necessity for the healthy social and psychological development of individuals who can function independently.

**Reciprocal Relationships Among Outcomes**

There are bidirectional relationships among efforts to achieve, quality of relationships, and psychological health (Johnson & Johnson, 1989). Each influences the others. **First**, caring and committed friendships come from a sense of mutual accomplishment, mutual pride in joint work, and the bonding that results from joint efforts. The more students care about each other, on the other hand, the harder they will work to achieve mutual learning goals. **Second**, joint efforts to achieve mutual goals promote higher self-esteem, self-efficacy, personal control, and confidence in their competencies. The healthier psychologically individuals are, on the other hand, the better able they are to work with others to achieve mutual goals. **Third**, psychological health is built on the internalization of the caring and respect received from loved-ones. Friendships are developmental advantages that promote self-esteem, self-efficacy, and general psychological adjustment. The healthier people are psychologically (i.e., free of psychological pathology such as depression, paranoia, anxiety, fear of failure, repressed anger, hopelessness, and meaninglessness), on the other hand, the more caring and committed their relationships. Since each outcome can induce the others, they are likely to be found together. They are a package with each outcome a door into all three. And together they induce positive interdependence and promotive interaction.

**Making Diversity Among Students A Strength**

The current research indicates that cooperative learning promotes greater efforts to achieve, more positive relationships, and greater psychological health than do competitive and
individualistic learning. These outcomes indicate that when cooperative learning is used the majority of the school day, diversity among students can be a potential source of creativity and productivity. Following four guidelines will help students capitalize on their diversity (Johnson & F. Johnson, 1997).

1. **Students must work together cooperatively with a high level of positive interdependence and the other five basic elements carefully structured.** Students must believe that they "sink or swim together" in striving to achieve important mutual goals. The discords of diversity are not automatically transformed into a symphony when people are brought face-to-face. Prejudice, stereotyping, and discrimination often increase with proximity. What largely determines whether interaction results in positive or negative relationships is the context within which the interaction takes place. Rather than requiring group members to compete to see who is best or work individualistically on their own, group members must work together to achieve mutual goals. When people cooperate, they tend to like each other more, trust each other more, are more candid with each other, and are more willing to listen to and be influenced by each other (Johnson & Johnson, 1989). When people compete or work individualistically, then liking, trust, influence, and candor tend to decrease. There is considerable evidence that cooperative experiences, compared with competitive and individualistic ones, promote more positive, committed, and caring relationships regardless of differences in ethnic, cultural, language, social class, gender, ability, or other differences (Johnson & Johnson, 1989). The impact of positive interdependence will be enhanced when members have equal status and social norms and authorities promote positive relationships and friendship formation (Watson, 1947; Williams, 1947; Allport, 1954).

2. **Students must have a superordinate identity that (a) unites the diverse personal identities of students and (b) is based on a pluralistic set of values.** Recognizing diversity and valuing and respecting differences is done in four steps. First, students need to develop an appreciation for their own gender, religious, ethnic, or cultural background. A **personal identity** is a consistent set of attitudes that defines "who you are" (see Johnson [1997] for a full discussion on
developing a personal identity). A personal identity consists of multiple sub-identities that are organized into a coherent, stable, and integrated whole. The sub-identities include a gender identity (fundamental sense of maleness or femaleness), an ethnic identity (sense of belonging to one particular ethnic group), a religious identity (sense of belonging to one particular religious group), and so forth. Second, students need to develop an appreciation for the gender, religious, ethnic, and cultural backgrounds of other members. Students can develop an identity that does not lead to the rejection of other members who are different. Third, students need to develop a strong superordinate identity that transcends their differences. Being the member of a learning group or society needs to be creedal rather than racial or ancestral. In essence, learning groups have their own culture that supersedes the individual cultures of members. Fourth, students need to learn a pluralistic set of values concerning democracy, freedom, liberty, equality, justice, the rights of individuals, and the responsibilities of citizenship. All members have equal value. Most learning groups, schools, and societies will become a multicultural unit knitted together by a common set of values.

3. **Gain sophistication about the differences among students through personal relationships that allow for candid discussions.** Only through knowing, working with, and personally interacting with members of diverse groups can individuals really learn to value diversity, utilize diversity for creative problem solving, and work effectively with diverse peers. Candid conversations with a friend about inadvertent misunderstandings can often teach more than numerous books. To gain the sophistication and skills you need to relate to, work with, and become friends with diverse peers, you need actual interaction, trust, and candor.

4. **Clarify miscommunications among students from different cultures, ethnic and historical backgrounds, social classes, genders, age-cohorts, and so forth.** If students from different gender, social class, ethnic, and cultural backgrounds are to communicate effectively, they must continually increase their language sensitivity by knowing the words and expressions that are appropriate and inappropriate in communicating with diverse groupmates and being aware of the
key elements of communication style and how diverse cultures use these elements to communicate. Without awareness of nuances in language and differences in style, the potential for garbled communication is enormous when interacting with diverse peers.

**Mean Effect Sizes For Impact Of Social Interdependence On Dependent Variables**

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Achievement</th>
<th>Interpersonal Attraction</th>
<th>Social Support</th>
<th>Self-Esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Studies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coop vs. Comp</td>
<td>0.67</td>
<td>0.67</td>
<td>0.62</td>
<td>0.58</td>
</tr>
<tr>
<td>Coop vs. Ind</td>
<td>0.64</td>
<td>0.60</td>
<td>0.70</td>
<td>0.44</td>
</tr>
<tr>
<td>Comp vs. Ind</td>
<td>0.30</td>
<td>0.08</td>
<td>-0.13</td>
<td>-0.23</td>
</tr>
<tr>
<td><strong>High Quality Studies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coop vs. Comp</td>
<td>0.88</td>
<td>0.82</td>
<td>0.83</td>
<td>0.67</td>
</tr>
<tr>
<td>Coop vs. Ind</td>
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<td>0.62</td>
<td>0.72</td>
<td>0.45</td>
</tr>
<tr>
<td>Comp vs. Ind</td>
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<td>0.27</td>
<td>-0.13</td>
<td>-0.25</td>
</tr>
<tr>
<td><strong>Mixed Operationalizations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coop vs. Comp</td>
<td>0.40</td>
<td>0.46</td>
<td>0.45</td>
<td>0.33</td>
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<tr>
<td>Coop vs. Ind</td>
<td>0.42</td>
<td>0.36</td>
<td>0.02</td>
<td>0.22</td>
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<tr>
<td><strong>Pure Operationalizations</strong></td>
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<td></td>
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<tr>
<td>Coop vs. Comp</td>
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<td>0.74</td>
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<tr>
<td>Coop vs. Ind</td>
<td>0.65</td>
<td>0.66</td>
<td>0.77</td>
<td>0.51</td>
</tr>
</tbody>
</table>

**Note:** Coop = Cooperation, Comp = Competition, Ind = Individualistic


[The summary](http://www.co-operation.org/pages/CLandD.html)