**Cooperative Group Skills – Basic Elements**

* **P**ositive Interdependence
* **I**ndividual Accountability
* **G**roup Processing
* **S**ocial Skills
* **Face**-to-Face Promotive Interaction

**Positive Interdependence**

In a football game, the quarterback who throws a pass and the receiver who catches it are positively interdependent. The success of one depends on the success of the other: It takes two (at least!) to complete the pass. One player cannot succeed without the other, and both have to perform competently if their mutual success is to be assured. They sink or swim together.

*All for one and one for all.*

-Alexander Dumas

 The first requirement for an effectively structured cooperative team is that members believe that they sink or swim together. In cooperative teams, members have two responsibilities: first, to complete their assigned tasks and second, to work with all members of the team to meet the goals of the team. The technical term for this dual responsibility is “positive interdependence.” Positive interdependence exists when each person perceives that he or she is linked with other members of the group so that the individual cannot succeed unless the other members do and that individuals coordinate their efforts with the efforts of the others to complete a task. Positive interdependence promotes a situation in which members (1) see that their work benefits other members of the group and other members’ work benefits them and (2) work together in small groups to maximize the contributions of all members by sharing resources, providing mutual support and encouragement, and celebrating joint successes. Clearly understood, positive interdependence highlights (1) that each group member’s efforts are required and indispensable for the group’s success (there can be no free riders) and (2) that each group member has a distinctive contribution to make to the joint effort because of his or her resources, roles, and responsibilities. Positive interdependence can be structured in a number of ways:

1. *Positive goal interdependence—*Members must believe that they sink or swim together, and this can be achieved when each member cares about how much each other contributes. It’s important for the group to develop or accept a clear mutual goal, and this goal must be easily articulated.
2. *Positive reward/celebration interdependence*—To supplement goal interdependence, the mentor might want to add joint rewards. For example, if the team meets it goal, we will celebrate by [state some activity that the team decided earlier]. Regular celebrations of the group’s efforts and successes enhance the quality of cooperation.
3. *Positive resource interdependence*—Cooperative relationships are highlighted when members have limited resources that must be shared (one copy of a problem or task per group) or each member has part of the required resources that the group needs to complete a task.
4. *Positive role interdependence*— Role interdependence comes about naturally in team situations where team members are assigned specific, interrelated tasks, much like the football example above. Role interdependence can be made more explicit by assigning roles such as reviewer or comprehension checker. A reviewer, for example, would be responsible for ensuring that a given work product such as a test suite meets its need. The role of comprehension checker focuses on periodically asking group members to explain their work. A large body of well-controlled research on the effectiveness of teaching at the pre-collegiate level found “checking for comprehension” to be one specific behavior that was significantly associated with higher levels of learning and achievement for students (Rosenshine and Stevens 1986).

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**Face-to-Face Promotive Interaction**

*In an industrial organization, it’s the group effort that counts. There’s really no room for stars in an industrial organization. You need talented people, but they can’t do it alone. They have to help.* -John F. Donnelly, president, Donnelly Mirrors

Positive interdependence results in promotive interaction, that is, individuals encouraging and facilitating each other’s efforts to achieve, complete tasks, and produce to reach the group’s goals. While positive interdependence in and of itself could have some effect on outcomes, it is the face-to-face promotive interaction among individuals fostered by positive interdependence that most powerfully influences efforts to achieve caring and committed relationships, psychological adjustment, and social competence. Promotive interaction is characterized by individuals helping each other, exchanging and sharing needed resources (information and materials), providing each other with feedback to improve subsequent performance on assigned tasks and responsibilities, challenging each other’s conclusions and reasoning to promote higher-quality decision making and greater insight into the problems and solutions being considered, encouraging others (perhaps by example) to work hard to achieve the group’s goals, acting in trusting and trustworthy ways, being motivated to strive for mutual benefit, and achieving a moderate level of stimulation characterized by low anxiety and stress.

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**Individual Accountability and Personal Responsibility**

The early settlers of the Virginia colony at Jamestown had a saying, “If you do not work, you do not eat.” Everyone had to do his or her fair share of the work. The third essential element of cooperative teams is individual accountability, which exists when the performance of each member is assessed, the results are given back to the individual and the group. The individual is held responsible by other members of the group for contributing a fair share to the group’s success. The group must know who needs more assistance, support, and encouragement in completing a task. It is also important that group members know they cannot hitchhike on the work of others. When it is difficult to identify members’ contributions, when members’ contributions are redundant, and when members are not responsible for the final outcome, members sometimes seek a free ride—or “social loafing” (Harkins and Petty 1982; Ingham et al. 1974; Kerr and Bruun 1983; Latane, Williams, and Harkins 1979; Moede 1927; Petty et al. 1977; Williams 1981; Williams, Harkins, and Latane 1981).

 Cooperative teams make each member a stronger individual in his or her own right. Individual accountability is the key to ensuring that all group members are in fact strengthened by working cooperatively. To ensure that each student is individually accountable to do his or her fair share of the group’s work, the mentor must assess how much effort each member is contributing to the group’s work, provide feedback to groups and individuals, help groups avoid redundant efforts by members, and ensure that every member is responsible for the final outcome. Individual accountability can be structured in several ways:

1. Keeping the size of the group small. The smaller the group, the greater individual accountability.
2. Questioning individuals. Directly asking a group member about her or his contribution often reveals the level of contribution and encourages group members to be responsible.
3. Examining individuals orally by randomly calling on a member to present her or his work to you in the presence of the group.
4. Observing each group during a work session and recording the frequency which each member contributes to the group’s work.
5. Assigning a member of a group the role of checker, who then asks other group members to explain the reasoning and rationale underlying their work.
6. Having members explain concepts to someone else.

In a cooperative team, members may initially learn knowledge, skills, strategies, or procedures as part of a team. Then, a member applies the knowledge or performs the skill, strategy, or procedure alone, demonstrating their personal mastery of the material.

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**Social Skills**

*I will pay more for the ability to deal with people than any other ability under the sun.*

 —John D. Rockefeller

An essential element of cooperative team is the appropriate use of interpersonal and small-group skills. The whole field of group dynamics is based on the premise that social skills are the keys to a group’s productivity (Johnson and F. Johnson 1991).To coordinate efforts to achieve mutual goals, members must get to know and trust each other, communicate accurately and unambiguously, accept and support each other, and resolve conflicts constructively (Johnson 1990, 1991; Johnson and F. Johnson 1991). Placing socially unskilled people in a group and telling them to cooperate does not guarantee that they will be able to do so effectively. We are not born knowing instinctively how to interact effectively with others. Interpersonal and small-group skills do not magically appear when they are needed. Students must be taught the social skills required for high-quality collaboration and be motivated to use them if cooperative groups are to be productive.

*We are not born knowing instinctively how to interact**effectively with others.*

 The greater the level of group members’ social skills and the more attention leaders pay to mentoring and rewarding the use of social skills, the higher the achievement that can be expected from the group. One way to teach a social skill to students is through the use of a T-chart:

1. Write the name of the skill to be learned and practiced at the top of the chart and draw a large T below it;
2. Label the left side of the T “Looks Like” and the right side “Sounds Like.”
3. Think of an example for each column and write them below the crossbar;
4. Ask students for other behaviors that the skill involves and list them on the left side;
5. Ask students for other phrases that exemplify the skill and list them on the right side;
6. Have group members practice both “Looks Like” and “Sounds Like”;
7. Observe a group and record the frequency with which the skill is used in the group.

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**Group Processing**

*Take care of each other. Share your energies with the group. No one must feel alone, cut off, for that is when you do not make it. —*Willi Unsoeld, renowned mountain climber

Effective group work is influenced by whether groups reflect on (i.e., process) how well they are functioning. A process is an identifiable sequence of events taking place over time, and a “process goal” refers to the sequence of events instrumental in achieving outcome goals (Johnson and F. Johnson 1991). Group processing can be defined as reflecting on a group session to describe what actions of the members were helpful and unhelpful and to decide what actions to continue or change. The purpose of group processing is to clarify and improve the effectiveness of the members in contributing to the collaborative efforts to achieve the group’s goals.

 To ensure that group processing takes place, mentors should allocate some time for team members to process how effectively members worked together. Groups need to describe what actions of the members were helpful and unhelpful in completing the group’s work and decide what behaviors to continue or change. Such processing (1) enables groups to focus on maintaining good working relationships among members, (2) facilitates the learning of cooperative skills, (3) ensures that members receive feedback on their participation, (4) ensures that members think on the metacognitive as well as the cognitive level, and (5) provides the means to celebrate the success of the group and reinforce the positive behaviors of group members. Some keys to successful group processing are allowing sufficient time for it to take place, providing a structure for processing (such as “list three things your group is doing well today and one thing you could improve”), emphasizing positive feedback, making the processing specific rather than general, maintaining student’s involvement in processing, reminding students to use their cooperative skills while they process, and communicating clear expectations about the purpose of processing.

Another way to provide feedback to the team is to have the mentor observe the team and learn what students do and do not understand as they explain concepts or their research to each other. Listening to students’ explanations provides valuable information about how well they understand their tasks, the major concepts and strategies being learned, and the basic elements of cooperative teams. Listening to students explain concepts or results to members of the group provides valuable information about what students do and do not know.

 An important aspect of group processing is celebration. Feeling successful, appreciated, and respected builds commitment, enthusiasm about working in cooperative groups, and a sense of self-efficacy.