Module 4 – Teaching for Learning

Required Readings (Included below)

1. Johnson, R. T. & Johnson, D. W. (1994). An Overview of Cooperative Learning. Originally published in: J. Thousand, A. Villa and A. Nevin (Eds), *Creativity and Collaborative Learning*. Brookes Press, Baltimore, 1994. Retrieved December 2, 2008 from http://www.co-operation.org/pages/cl.html.

And

2. Johnson, R. T. & Johnson, D. R. and Smith, K. A. (n.d). *Cooperative Learning: Formal Cooperative Learning, Informal Cooperative Learning, and Cooperative Base Groups*. Retrieved December 1, 2009 from http://www.ce.umn.edu.

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1.
Cooperative Learning

- What is cooperative learning?
- Why use cooperative learning?
- What makes cooperative groups work?
  - Positive interdependence
  - Face-to-face promotive interaction
  - Individual and group accountability
  - Interpersonal and small group skills
  - Group processing
- References

What Is Cooperative Learning?

Cooperation is working together to accomplish shared goals. 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. The idea is simple. Class members are organized into small groups after receiving instruction from the teacher. They then work through the assignment until all group members successfully understand and complete it. Cooperative efforts result in participants striving for mutual benefit so that all group members gain from each other's efforts (Your success benefits me and my success benefits you), recognizing that all group members share a common fate (We all sink or swim together here), knowing that one's performance is mutually caused by oneself and one's colleagues (We can not do it without you), and feeling proud and jointly celebrating when a group member is recognized for achievement (We all congratulate you on your accomplishment!). In cooperative learning situations there is a positive interdependence among students' goal attainments; students perceive that they can reach their learning goals if and only if the other students in the learning group also reach their goals (Deutsch, 1962; Johnson & Johnson, 1989). A team member's success in creating a multi-media presentation on saving the environment, for example, depends on both individual effort and the efforts of other group members who contribute needed knowledge, skills, and resources. No one group member will possess all of the information, skills, or resources necessary for the highest possible quality presentation.

Why Use Cooperative Learning?

Students' learning goals may be structured to promote cooperative, competitive, or individualistic efforts. In contrast to cooperative situations, competitive situations are ones in which students work against each other to achieve a goal that only one or a few can attain. In competition there is a negative interdependence among goal achievements; students perceive that they can obtain their goals if and only if the other students in the class fail to obtain their goals (Deutsch, 1962; Johnson & Johnson, 1989). Norm-referenced evaluation of achievement occurs. The result is that students either work hard to do better than their classmates, or they take it easy because they do not believe they have a chance to win. In individualistic learning situations students work alone to accomplish goals unrelated to those of classmates and are evaluated on a criterion-referenced basis. Students' goal achievements are independent; students perceive that the achievement of their learning goals is unrelated to what other students do (Deutsch, 1962, Johnson & Johnson, 1989). The result is to focus on self-interest and personal success and ignore as irrelevant the successes and failures of others.

There is a long history of research on cooperative, competitive, and individualistic efforts. Since the first research study in 1898, nearly 600 experimental studies and over 100 correlational studies have been conducted (see Johnson & Johnson, 1989 for a complete review of these studies). The multiple outcomes studied can be classified into three major categories: achievement/productivity, positive relationships, and psychological health. The research clearly indicates that cooperation, compared with competitive and individualistic efforts, typically results in (a) higher achievement and greater productivity, (b) more caring, supportive, and committed relationships, and (c) greater psychological health, social competence, and self-esteem. The positive effects that cooperation has on so many important outcomes makes cooperative learning one of the most valuable tools educators have.

What Makes Cooperative Groups Work?

Educators fool themselves if they think well-meaning directives to "work together," "cooperate," and "be a team," will be enough to create cooperative efforts among group members. Placing students in groups and telling them to work together does not in and of itself result in cooperation. Not all groups are cooperative. Sitting in groups, for example, can result in competition at close quarters or individualistic effort with talking. To structure lessons so students do in fact work cooperatively with each other requires an understanding of the components that make cooperation work. Mastering the essential components of cooperation allows teachers to:

1. Take existing lessons, curricula, and courses and structure them cooperatively.
2. Tailor cooperative learning lessons to meet the unique instructional circumstances and needs of the curricula, subject areas, and students.
3. Diagnose the problems some students may have in working together and intervene to increase the effectiveness of the student learning groups.

The essential components of cooperation are positive interdependence, face-to-face promotive interaction, individual and group accountability, interpersonal and small group skills, and group processing (Johnson, Johnson, & Holubec, 1993). Systematically structuring those basic elements into group learning situations helps ensure cooperative efforts and enables the disciplined implementation of cooperative learning for long-term success.

The first and most important element in structuring cooperative learning is positive interdependence. Positive interdependence is successfully structured when group members perceive that they are linked with each other in a way that one cannot succeed unless everyone succeeds. Group goals and tasks, therefore, must be designed and communicated to students in ways that make them believe they sink or swim together. When positive interdependence is solidly structured, it highlights that (a) each group member's efforts are required and indispensable for group success and (b) each group member has a unique contribution to make to the joint effort because of his or her resources and/or role and task responsibilities. Doing so creates a commitment to the success of group members as well as one's own and is the heart of cooperative learning. If there is no positive interdependence, there is no cooperation.

The second basic element of cooperative learning is promotive interaction, preferably face-to-face. Students need to do real work together in which they promote each other's success by sharing resources and helping, supporting, encouraging, and applauding each other's efforts to achieve. There are important cognitive activities and interpersonal dynamics that can only occur when students promote each other's learning. This includes orally explaining how to solve problems, teaching one's knowledge to others, checking for understanding, discussing concepts being learned, and connecting present with past learning. Each of those activities can be structured into group task directions and procedures. Doing so helps ensure that cooperative learning groups are both an academic support system (every student has someone who is committed to helping him or her learn) and a personal support system (every student has someone who is committed to him or her as a person). It is through promoting each other's learning face-to-face that members become personally committed to each other as well as to their mutual goals.

The third basic element of cooperative learning is individual and group accountability. Two levels of accountability must be structured into cooperative lessons. The group must be accountable for achieving its goals and each member must be accountable for contributing his or her share of the work. Individual accountability exists when the performance of each individual is assessed and the results are given back to the group and the individual in order to ascertain who needs more assistance, support, and encouragement in learning. 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 subsequently can gain greater individual competency.

The fourth basic element of cooperative learning is teaching students the required interpersonal and small group skills. Cooperative learning is inherently more complex than competitive or individualistic learning because students have to engage simultaneously in taskwork (learning academic subject matter) and teamwork (functioning effectively as a group). Social skills for effective cooperative work do not magically appear when cooperative lessons are employed. Instead, social skills must be taught to students just as purposefully and precisely as academic skills. Leadership, decision-making, trust-building, communication, and conflict-management skills empower students to manage both teamwork and taskwork successfully. Since cooperation and conflict are inherently related (see Johnson & Johnson, 1995), the procedures and skills for managing conflicts constructively are especially important for the long-term success of learning groups. Procedures and strategies for teaching students social skills may be found in Johnson (1991, 1993) and Johnson and F. Johnson (1994).

The fifth basic element of cooperative learning is group processing. Group processing exists when group members discuss how well hey 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. Continuous improvement of the processes of learning results from the careful analysis of how members are working together and determining how group effectiveness can be enhanced.

References

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- Johnson, D. W. (1991). *Human relations and your career* (3rd. ed.). Englewood Cliffs, NJ: Prentice-Hall.
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2. Cooperative Learning

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Table 1: Comparison Of Old And New Paradigms Of Teaching

Factor	Old Paradigm Of Teaching	New Paradigm Of Teaching
Knowledge	Transferred From Faculty To Students	Jointly Constructed By Students And Faulty
Students	Passive Vessel To Be Filled By Faculty's Knowledge	Active Constructor, Discoverer, Transformer of Own Knowledge
Faculty Purpose	Classify And Sort Students	Develop Students' Competencies And Talents
Relationships	Impersonal Relationships Among Students And Between Faculty And Students	Personal Transaction Among Students And Between Faculty And Students
Context	Competitive/Individualistic	Cooperative Learning In Classroom And Cooperative Teams Among Faculty
Assumption	Any Expect Can Teach	Teaching Is Complex And Requires Considerable Training

Key Messages

1. **Organizational Structure Has To Change:**
   a. From Mass-Production, Competitive, Loosely Coupled Structure
   b. To Team-Based, Cooperative, High Performance Structure
2. **Both Students And Faculty Work In Teams:**
   a. Students Work In Cooperative Learning Groups
   b. Faculty Work In Colleagial Teaching Teams

3. **Teams Continuously Improve The Quality Of The Processes Of Learning And Instruction.**

Definitions

*A **learning goal** is a desired future state of competence or mastery in the subject area being studied. A **goal structure** specifies the type of interdependence among individuals as they strive to accomplish their goals. Interdependence may be positive (cooperation), negative (competition), or none (individualistic efforts).*

Cooperation: We Sink Or Swim Together
Individuals work together to achieve shared goals. Individuals work together to maximize their own and each other's learning.
Work in small, often heterogeneous groups
Strive for all group members' success
What benefits self benefits others
Joint success is celebrated
Rewards are viewed as unlimited
Evaluated by comparing performance to preset criteria

Competition: I Swim, You Sink; I Sink, You Swim
Individuals work against each other to achieve a goal only one or a few can attain.
Work alone
Strive to be better than classmates
What benefits self deprives others
Own success and others' failure is celebrated
Rewards are limited
Graded on a curve or ranked from "best" to "worst"

Individualistic: We Are Each In This Alone

Individuals work by themselves to accomplish learning goals unrelated to those of other individuals.
Work alone
Strive for own success
What benefits self does not affect others
Own success is celebrated
Rewards are viewed as unlimited
Evaluated by comparing performance to preset criteria

Basic Elements Of Cooperative Teams

Positive Interdependence

Team members perceive that they need each other in order to complete the group's task ("sink or swim together"). Instructors may structure positive interdependence by establishing **mutual goals** (maximize own and each other's productivity), **joint rewards** (if all group members achieve above the criteria, each will receive bonus points), **shared resources** (members have different expertise), and **assigned roles** (summarizer, encourager of participation, elaborator).

Individual Accountability

Assessing the quality and quantity of each member's contributions and giving the results to the group and the individual.

Face-to-Face Promotive Interaction

Team members promote each other's productivity by helping, sharing, and encouraging efforts to produce. Members explain, discuss, and teach what they know to teammates. Instructors structure teams so that members sit knee-to-knee and talk through each aspect of the tasks they are working to complete.

Interpersonal And Small Group Skills

Groups cannot function effectively if members do not have and use the needed social skills. Instructors emphasize these skills as purposefully and precisely as job-performance skills. Collaborative skills include instructorship, decision-making, trust- building, communication, and conflict-management skills.

Group Processing

Groups need specific time to discuss how well they are achieving their goals and maintaining effective working relationships among members. Instructors structure group processing by assigning such tasks as (a) list at least three member actions that helped the group be successful and (b) list one action that could be added to make the group even more successful tomorrow. Instructors also monitor the groups and give feedback on how well the groups are working together.

Types Of Cooperative Learning

Formal Cooperative Learning Groups

Students work together for one or several class sessions to achieve shared learning goals and complete jointly specific tasks and assignments. Formal cooperative learning groups provide the foundation for all other cooperative learning procedures. They are structured through pre-instructional decisions, setting the task and the cooperative structure, monitoring the groups while they work and intervening to improve taskwork and teamwork, and evaluating student learning and processing group functioning.

Informal Cooperative Learning Groups

Students work together in temporary, ad hoc groups that last for only one discussion or class period to achieve joint learning goals. Informal cooperative learning groups are used to focus student attention on the material to be learned, create an expectation set and mood conducive to learning, ensure students cognitively process the material being taught, and provide closure to an instructional session.

Cooperative Base Groups

Long-term groups (lasting for at least one semester or year) with stable membership whose primary responsibility is to give each member the support, encouragement, and assistance he or she needs to progress academically and develop cognitively and socially in healthy ways.

Informal Cooperative Learning

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, 1998b; Johnson, Johnson, & Smith, 1998). Informal cooperative learning groups also ensure that misconceptions, incorrect understanding, and gaps in understanding are identified and corrected, and learning experiences are personalized. Every 10 to 15 minutes, students should be asked to discuss/process what they are learning. Breaking up lectures with short cooperative processing times will give you slightly less lecture time, but will help counter what is proclaimed as the main problem of lectures: *"The information passes from the notes of the professor to the notes of the student without passing through the mind of either one."* During lecturing and direct teaching the instructor ensures that students do the intellectual work of organizing material, explaining it, summarizing it, and integrating it into existing conceptual networks. The **procedure** for using informal cooperative learning consists of "*focused discussions*" before and after the lecture (bookends) and interspersing turn-to-your-partner discussions throughout the lecture.

1. **Introductory Focused Discussion**: Plan one or two questions that will help students **organize in advance** what they know about the topic to be presented and create an **expectation set** about what the lecture will cover. Assign students to pairs or triads. Explain (a) the task of answering the questions in a four-minute time period and (b) the positive goal interdependence of reaching consensus.

2. **Turn-To-Your-Partner Discussions**: Divide the lecture into 10 to 15 minute segments. This is about the length of time a motivated adult can concentrate on information being presented. After each segment, ask students to turn to the person next to them and work cooperatively in answering a question (specific enough so that students can answer it in about three minutes) that requires students to cognitively process the material just presented. The procedure is:
   a. Each student formulates his or her answer.
   b. Students share their answer with their partner.
   c. Students listen carefully to their partner's answer.
   d. The pairs **create** a new answer that is superior to each member's initial formulation by integrating the two answers, building on each other's thoughts, and synthesizing.

   The question may require students to:
   a. Summarize the material just presented
   b. Give a reaction to the theory, concepts, or information presented
   c. Predict what is going to be presented next; hypothesize
   d. Solve a problem
   e. Relate material to past learning and integrate it into conceptual framework
   f. Resolve conceptual conflict created by presentation

   Ensure students are **individually accountable** for answering the question by randomly choosing two or three students to give 30 second summaries of their pair discussions. Repeat this sequence of lecture-segment and pair-discussion until the lecture is completed.

3. **Closure Focused Discussion:** Give a closure discussion task that requires students to summarize what they have learned from the lecture. The discussion should result in students integrating what they have just learned into existing conceptual frameworks, point students toward what the homework will cover or what will be presented in the next class session, and identifies questions they have about what was presented. This provides closure to the lecture.

Informal cooperative learning ensures students are actively involved in understanding what they are learning. It also provides time for instructors to gather their wits, reorganize notes, take a deep breath, and move around the class listening to what students are saying. Listening to student discussions can give instructors direction and insight into how well students understand the concepts and material being taught (who, unfortunately, may not have graduate degrees in the topic you are presenting).

Purposes Of Informal Cooperative Learning

Form a pair. Rank order the following purposes of informal cooperative learning from most important ("1") to least important ("7").

	Focuses student attention on the material to be learned.
	Sets a mood conducive to learning.
	Helps cognitively organize in advance the material to be covered in a class session.
	Ensures that students cognitively process the material being taught.
	Provides closure to an instructional session.
	Allows for identifying and correcting misconceptions, incorrect understanding, and gaps in comprehension.
	Personalizes learning experiences.

Introductory Focused Discussion Pairs

To prepare for the class session students may be required to complete a short initial focused discussion task. Plan your lecture around a series of questions that will help students **organize in advance** what they know about the topic to be presented and create an **expectation set** about what the lecture will cover. Write the questions on an overhead transparency or on the board.

Task: Answer the questions.

Cooperative: Create, with your partner, one answer for each question, using the following sequence:

1. Each student **formulates** his or her answer.
2. Students **share** their answer with their partner.
3. Students **listen** carefully to partner's answer.
4. Pairs **create** a new answer that is superior to each member's initial formulation through the process of association, building on each other's thoughts, and synthesizing.

The discussion is aimed at promoting advance organizing of what the students know about the topic to be presented and to set expectations as to what the lecture will cover.

Expected Criteria For Success: Each student able to explain answers.

Individual Accountability: One member from the pair will be randomly chosen to explain the answer. Periodically use the simultaneous explaining procedure of having each group member explain the group's answers to a member of another group.

Expected Behaviors: Explaining, listening, synthesizing by all members.

Intergroup Cooperation: Whenever it is helpful, check procedures, answers, and strategies with another group.

Informal Cooperative Learning Planning Form

Description of the Lecture

1. **Lecture Topic**: _____
2. **Objectives** (Major Understandings Students Need To Have At The End Of The Lecture):
   a. _____
   b. _____
3. **Time Needed**: _____
4. **Method For Assigning Students To Pairs Or Triads**: _____
5. **Method Of Changing Partners Quickly**: _____
6. **Materials** (such as transparencies listing the questions to be discussed and describing the **formulate, share, listen, create** procedure):
   _____

Advanced Organizer Question(s)

Questions should be aimed at promoting **advance organizing** of what the students know about the topic to be presented and **establishing expectations** as to what the lecture will cover.

1. _____
2. _____
3. _____

Cognitive Rehearsal Questions

List the specific questions to be asked every 10 or 15 minutes to ensure that participants understand and process the information being presented. Instruct students to use the **formulate, share, listen, and create** procedure.

1. _____
2. _____
3. _____
4. _____

Monitor by systematically observing each pair. Intervene when it is necessary. Collect data for whole class processing. Students' explanations to each other provide a window into their minds that allows you to see what they do and do not understand. Monitoring also provides an opportunity for you to get the know your students better.

Summary Question(s)

Give an ending discussion task and require students to come to consensus, write down the pair or triad's answer(s), sign the paper, and hand it in. Signatures indicate that students agree with the answer, can explain it, and guarantee that their partner(s) can explain it. The questions could (a) ask for a summary, elaboration, or extension of the material presented or (b) precue the next class session.

1. _____
2. _____

Celebrate Students' Hard Work

1. _____
2. _____

Formal Cooperative Learning

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, 1998). Any course requirement or assignment may be reformulated to be cooperative. In formal cooperative learning groups teachers:

1. **Make Preinstructional Decisions:** In every lesson you (a) formulate objectives, (b) decide on the size of groups, (c) choose a method for assigning students to groups, (d) decide which roles to assign group members, (e) arrange the room, and (f) arrange the materials students need to complete the assignment.
2. **Explain the Task and Cooperative Structure:** In every lesson you (a) explain the academic assignment to students, (b) explain the criteria for success, (c) structure positive interdependence, (d) explain the individual accountability, and (e) explain the behaviors you expect to see during the lesson.
3. **Monitor and Intervene:** While you (a) conduct the lesson, you (b) monitor each learning group and (c) intervene when needed to improve taskwork and teamwork, and (d) bring closure to the lesson.
4. **Evaluate and Process:** You (a) assess and evaluate the quality and quantity of student achievement, (b) ensure students carefully process the effectiveness of their learning groups, (c) have students make a plan for improvement, and (d) have students celebrate the hard work of group members.

If students need help in completing the assignment, they are encouraged to first ask classmates for assistance and request help from the instructor second. Students are expected to interact with groupmates, share ideas and materials, support and encourage each other's academic achievement, orally explain and elaborate the concepts and strategies being learned, and hold each other accountable for completing the assignment at a high level of excellence. A criterion-referenced evaluation is used. In each class session instructors must make the choice of being "*a sage on the stage*" or "*a guide on the side*." In doing so they might remember **the challenge in teaching is not covering the material for the students, it's uncovering the material with the students**.

All cooperative learning (formal, informal, base groups) is characterized by give basic elements:

1. **Positive Interdependence:** Group members perceive that they need each other in order to complete the group's task ("sink or swim together"). Instructors may structure positive interdependence by establishing **mutual goals** (maximize own and each other's productivity), **joint rewards** (if all group members achieve above the criteria, each will receive bonus points), **shared resources** (members have different expertise), and **assigned roles** (summarizer, encourager of participation, elaborator).
2. **Individual Accountability:** Assessing the quality and quantity of each member's contributions and giving the results to the group and the individual.
3. **Promotive (Face-To-Face) Interaction:** Group members promote each other's productivity by helping, sharing, and encouraging efforts to produce. Members explain, discuss, and teach what they know to teammates. Instructors structure groups so that members sit knee-to-knee and talk through each aspect of the tasks they are working to complete.
4. **Interpersonal and Small Group Skills:** Groups cannot function effectively if members do not have and use the needed social skills. Instructors emphasize these skills as purposefully and precisely as job-performance skills. Cooperative skills include leadership, decision-making, trust- building, communication, and conflict-management skills.
5. **Group Processing:** Groups need specific time to discuss how well they are achieving their goals and maintaining effective working relationships among members. Instructors structure group processing by assigning such tasks as (a) list at least three member actions that helped the group be successful and (b) list one action that could be added to make the group even more successful tomorrow. Instructors also monitor the groups and give feedback on how well the groups are working together.

The Instructor's Role in Cooperative Learning

Make Pre-Instructional Decisions

Specify Academic and Social Skills Objectives: Every lesson has both (a) academic and (b) interpersonal and small group skills objectives.

Decide on Group Size: Learning groups should be small (groups of two or three members, four at the most).

Decide on Group Composition (Assign Students to Groups): Assign students to groups randomly or select groups yourself. Usually you will wish to maximize the heterogeneity in each group.

Assign Roles: Structure student-student interaction by assigning roles such as Reader, Recorder, Encourager of Participation and Checker for Understanding.

Arrange the Room: Group members should be "knee to knee and eye to eye" but arranged so they all can see the instructor at the front of the room.

Plan Materials: Arrange materials to give a "sink or swim together" message. Give only one paper to the group or give each member part of the material to be learned.

Explain Task And Cooperative Structure

Explain the Academic Task: Explain the task, the objectives of the lesson, the concepts and principles students need to know to complete the assignment, and the procedures they are to follow.

Explain the Criteria for Success: Student work should be evaluated on a criteria-referenced basis. Make clear your criteria for evaluating students' work.

***Structure Positive Interdependence:** Students must believe they "sink or swim together." Always establish mutual goals (students are responsible for their own learning and the learning of all other group members). Supplement, goal interdependence with celebration/reward, resource, role, and identity interdependence.

Structure Intergroup Cooperation: Have groups check with and help other groups. Extend the benefits of cooperation to the whole class.

***Structure Individual Accountability:** Each student must feel responsible for doing his or her share of the work and helping the other group members. Ways to ensure accountability are frequent oral quizzes of group members picked at random, individual tests, and assigning a member the role of Checker for Understanding.

***Specify Expected Behaviors:** The more specific you are about the behaviors you want to see in the groups, the more likely students will do them. Social skills may be classified as **forming** (staying with the group, using quiet voices), **functioning** (contributing, encouraging others to participate), **formulating** (summarizing, elaborating), and **fermenting** (criticizing ideas, asking for justification). Regularly teach the interpersonal and small group skills you wish to see used in the learning groups.

Monitor and Intervene

***Arrange Face-to-Face Promotive Interaction:** Conduct the lesson in ways that ensure that students promote each other's success face-to-face.

Monitor Students' Behavior: This is the fun part! While students are working, you circulate to see whether they understand the assignment and the material, give immediate feedback and reinforcement, and praise good use of group skills. Collect observation data on each group and student.

Intervene to Improve Taskwork and Teamwork: Provide **taskwork assistance** (clarify, reteach) if students do not understand the assignment. Provide **teamwork assistance** if students are having difficulties in working together productively.

Evaluate and Process

Evaluate Student Learning: Assess and evaluate the quality and quantity of student learning. Involve students in the assessment process.

***Process Group Functioning**: Ensure each student receives feedback, analyzes the data on group functioning, sets an improvement goal, and participates in a team celebration. Have groups routinely list three things they did well in working together an done thing they will do better tomorrow. Summarize as a whole class. Have groups celebrate their success and hard work.

Cooperative Lesson Planning Form

Grade Level: _____ Subject Area: _____ Date: _____

Lesson: _____

Objectives

Academic: _____

Social Skills: _____

Preinstructional Decisions

Group Size: _____ Method Of Assigning Students: _____

Roles: _____

Room Arrangement: _____

Materials: _____

- ◊ One Copy Per Group
- ◊ Jigsaw
- ◊ Other: _____
- ◊ One Copy Per Person
- ◊ Tournament

Explain Task And Cooperative Goal Structure

1. Task: _____
   _____
2. Criteria For Success: _____
   _____
3. Positive Interdependence: _____
   _____
4. Individual Accountability: _____
5. Intergroup Cooperation: _____
6. Expected Behaviors: _____

Monitoring And Intervening

1. Observation Procedure: _____ Formal _____ Informal
2. Observation By: _____ Teacher _____ Students _____ Visitors
3. Intervening For Task Assistance: _____
   _____
4. Intervening For Teamwork Assistance: _____
   _____
5. Other: _____

Evaluating And Processing

1. Assessment Of Members' Individual Learning: _____
   _____
2. Assessment Of Group Productivity: _____
   _____
3. Small Group Processing: _____
   _____
4. Whole Class Processing: _____
   _____
5. Charts And Graphs Used: _____
   _____
6. Positive Feedback To Each Student: _____
   _____
7. Goal Setting For Improvement: _____
   _____
8. Celebration: _____
   _____
9. Other: _____

Jig-Saw Procedure

Task: Think of a reading assignment you will give in the near future. Divide the assignment in three parts. Plan how you will use the jig-saw procedure. Script out exactly what you will say to your class in using each part of the jig-saw procedure.

Procedure: One way to structure positive interdependence among group members is to use the jigsaw method of creating resource interdependence. The steps for structuring a "jigsaw" lesson are:

1. **Cooperative Groups:** Distribute a set of materials to each group. The set needs to be divisible into the number of members of the group (2, 3, or 4 parts). Give each member one part of the set of materials.
2. **Preparation Pairs:** Assign students the cooperative task of meeting with someone else in the class who is a member of another learning group and who has the same section of the material and complete two tasks:
   a. Learning and becoming an expert on their material.
   b. Planning how to teach the material to the other members of their groups.
3. **Practice Pairs:** Assign students the cooperative task of meeting with someone else in the class who is a member of another learning group and who has learned the same material and share ideas as to how the material may best be taught. These "practice pairs" review what each plans to teach their group and how. The best ideas of both are incorporated into each's presentation.
4. **Cooperative Groups:** Assign students the cooperative tasks of:
   a. Teaching their area of expertise to the other group members.
   b. Learning the material being taught by the other members.
5. **Evaluation:** Assess students' degree of mastery of all the material. Reward the groups whose members all reach the preset criterion of excellence.

Cooperative Base Groups

Cooperative base groups are long-term, heterogeneous cooperative learning groups with stable membership. Members' primary responsibilities are to (a) provide each other with support, encouragement, and assistance in completing assignments, (b) hold each other accountable for striving to learn, and (c) ensure all members are making good academic progress. Typically, cooperative base groups (a) are heterogeneous in membership (especially in terms of achievement motivation and task orientation), (b) meet regularly (for example, daily or biweekly), and (c) last for the duration of the class (a semester or year) or preferably until the students are graduated.

There are two ways base groups may be used. The **first** is to have a base group in each course which stays together only for the duration of the course. The **second** is to organize all students in the school into school base groups that function as an essential component of school life. School base groups stay together for at least a year and preferably until all members are graduated. The **agendas** of both types of base groups can include:

1. **Academic support tasks:** Base group members encourage each other to master course content and complete all assignments. Members check to see what assignments each member has and what help they need to complete them. The group discusses assignments, answers any questions about assignments, provides information about what a member missed, and plans, reviews, and edits papers. Members can prepare each other to take tests and go over the questions missed afterwards. Members can share their areas of expertise (such as art or computers) with each other. Above all, members monitor each other's academic progress and make sure all members are achieving.

2. **Personal support tasks:** Base group members listen sympathetically when a member has problems with parents or friends, have general discussions about life, give each other advice about

relationships, and help each other solve nonacademic problems. Base groups provide interpersonal relationships that personalize the course.

3. **Routine tasks:** The base group provides a structure for managing course procedures such as attendance and homework.

4. **Assessment and evaluation tasks:** The base group provides a structure for assessing and evaluating student academic learning. Many of the more complex and important assessment procedures can best be used in the context of cooperative learning groups.

Base groups focus the power of long-term relationships on supporting academic progress, motivating academic effort, creating positive attitudes toward learning, increasing retention and graduation rates, and providing the caring and commitment necessary for a full and complete college experience.

Forming Base Groups

Group Size	Four (or three)
Assigning Students	Random Assignment To Ensure Heterogeneity
Arranging Room	Permanent Place For Each Group To Meet
Preparing Materials	Standard Forms Students Use Each Meeting; Group File Folders
Assigning Roles	Runner, Explainer, Accuracy Checker, Encourager

Base Group Agendas

Opening Tasks	**Closing Tasks**
Greeting And Welcome	Review And Clarify Assignments
Relationship And Group Building Task	Discuss What Was Learned
Check Homework	Discuss Applications Of Learnings
Review Progress: Ongoing Assignments	Celebrate Members' Hard Work

Base Groups

Types	Functions	Nature
Class (Meet At The Beginning And Ending Of Each Session Or Week)	Provide Academic Support To Members	Heterogeneous in Membership
School (Meet At The Beginning And Ending Of Each Day Or Week)	Provide Personal Support To Members	Meet Regularly (Daily, Bi-Weekly)
	Manage Class Routines And Administrative Requirements	Last For Duration Of Class, Year, Or Until Graduation
	Personalize Class And College Experience	Ensure All Members Are Making Good Academic Progress

Integrated Use Of Cooperative Learning

Structuring cooperative learning in classrooms involves integrating the use of the three types of cooperative learning groups. Each course may have a mixture of cooperative formal, informal, and base groups. Given below are two examples of how the different ways of using cooperative learning may be used.

Integrated Use For 50 Minute Session

Step	Activity	Time
1	Welcome And Opening Base Group Meeting	10
2	Choice 1: Direct Teaching, Informal Cooperative Learning	35
3	Choice 2: Work In Formal Cooperative Learning Groups	35
4	Choice 3: Direct Teaching, Formal Coop Learning Groups	35
5	Choice 4: Academic Controversy	35
6	Closing Base Group Meeting	5

Weekly Schedule For 50 Minute Class Sessions

Session 1		Session 2		Session 3	
Time	**Activity**	**Time**	**Activity**	**Time**	**Activity**
15	Base Group Meeting	5	Base Group Meeting	5	Base Group Meeting
30	Lecture With Informal CL	35	Formal CL Groups Work On Assignment Or Controversy	15	Formal CL Groups Work On Assignment
5	Base Group Meeting	5	Base Group Meeting	10	Lecture With Informal CL
				15	Base Group Meeting

Integrated Use For 90 Minute Session

Step	Activity	Time
1	Opening Base Group Meeting	10
2	Direct Teaching With Informal Cooperative Learning	25
3	Work On Assignment In Formal Cooperative Learning	40
4	Direct Teaching With Informal Cooperative Learning	10
5	Closing Base Group Meeting	5

Integrated Use Of All Types Of Cooperative Learning

Task: Plan a day (week) with cooperative learning being used 100 percent of the time. The objective is to provide on overall gestalt as to how the four different types of cooperative learning and a wide variety of the lesson structures may be used in an integrated way.

Cooperation: Find a partner who teaches the same grade level and subject area as you do. Develop one plan for the two of you, both of you must agree that the plan will work, and both of you must be able to implement the plan.

Individual Accountability: Each person will have to present the plan to a member of another group.

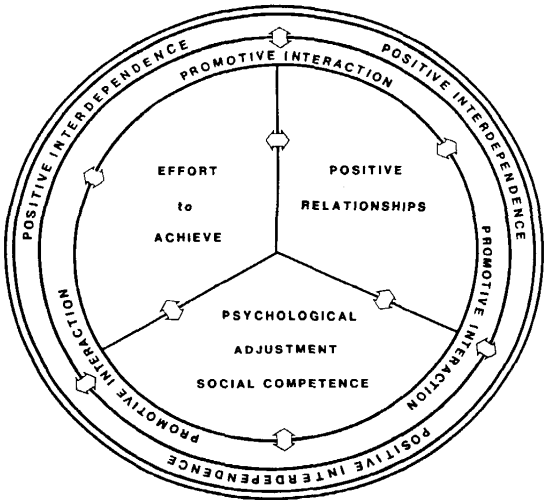
Expected Behaviors: Explaining, listening, synthesizing by all members.

Intergroup Cooperation: Whenever it is helpful, check procedures and plans with other groups.

Note: Now that it has been established that cooperative learning may be used 100 percent of the day, the issue of the supplemental use of competitive and individualistic learning becomes relevant. The next chapter focuses on that issue.

The Research Promise

First Study Was Conducted In 1898
Over 550 Experimental Studies
Over 100 Correlational Studies
High Generalizability
Multiple Outcomes
Responsible Practice



Effort To Achieve | Positive Relationships | Psychological Health

Achievement	Esprit-De-Corps, Cohesion	Psychological Adjustment
Long-Term Retention	Liking For Each Other	Social Competencies
Higher-Level Reasoning	Heterogeneity	Self-Esteem
Intrinsic Motivation	Academic Support	Shared Identity
On-Task Behavior	Personal Support	Coping With Stress

Impact Of Social Interdependence On Dependent Variables: Mean Effect Sizes

	Coop / Comp	Coop / Ind	Comp / Ind
Achievement	**0.67**	**0.64**	**0.30**
Interpersonal Attraction	**0.67**	**0.60**	**0.08**
Social Support	**0.62**	**0.70**	**-0.13**
Self-Esteem	**0.58**	**0.44**	**-0.23**

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

Johnson, D. W., & Johnson, R. (1989). **Cooperation and competition: Theory and research**. Edina, MN: Interaction Book Company.

Recommended Resources On Cooperation

Books

Johnson, D. W., Johnson, R. & Smith, K.A. (1998). **Active Learning: Cooperation in the College Classroom** (2nd Edition). Edina, MN: Interaction Book Company.

Campbell, B., & Smith, K. (Eds.). (1997). **New Paradigms In College Teaching**. Edina, MN: Interaction Book Company.

Johnson, D.W., Johnson, R.T., and Smith, K.A. 1998b. Cooperative learning returns to college: What evidence is there that it works? *Change*, *30* (4), 26-35

Johnson, D.W., Johnson, R.T., and Smith, K.A. 1998c. Maximizing instruction through cooperative learning. *ASEE Prism, 7*(6), 24-29.

Johnson, D.W., Johnson, R.T., and Smith, K.A. 2000. Constructive controversy: The power of intellectual conflict. *Change*, *32* (1), 28-37.

Johnson, D. W., & Johnson, R. (1996). **Meaningful And Manageable Assessment Through Cooperative Learning**. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1989). **Cooperation And Competition: Theory And Research**. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1997). **Learning to Lead Teams: Developing Leadership Skills**. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1999). **Human Relations: Valuing Diversity**. Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R., & Holubec, E. (2002). **Circles Of Learning** (5th Edition). Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1994). **Leading The Cooperative School** (2nd Edition). Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1999). **Learning Together And Alone: Cooperative, Competitive, And Individualistic Learning** (5th Edition). Englewood Cliffs, NJ: Prentice-Hall.

Johnson, D. W. (2000). **Reaching Out: Interpersonal Effectiveness And Self-Actualization** (7th Edition). Boston: Allyn & Bacon.

Johnson, D. W., & Johnson, F. (2000). **Joining Together: Group Theory And Skills** (7th Edition). Boston: Allyn & Bacon.

Smith, K.A. 2004. *Teamwork and Project Management*. New York: McGraw-Hill. BEST Series.