Cooperative learning is gaining the attention of vocational educators who must prepare students for employment in a workplace increasingly focused on teamwork. It is a model that provides opportunities for students to explore concepts and develop interpersonal skills that enhance their learning. Research shows that cooperative learning promotes higher self-esteem among students and more positive attitudes toward others. Students who participate in cooperative learning groups are reported to realize greater achievement and greater levels of understanding, to have an ability to absorb content that requires higher levels of thinking, and to be able to retain what they have learned longer. Five elements of small group learning are essential to the process: (1) positive interdependence; (2) face-to-face student interactions; (3) individual accountability; (4) social skills; and (5) group processing. Implementation of cooperative learning strategies requires teacher training and follow-up. The Johnson and Johnson model identifies the decisions involved in planning a cooperative learning group lesson: selecting tasks, determining content and accepted performance level, and selecting social skills students will learn. The teacher may require new skills to manage the classroom. (An annotated listing of 15 print resources is provided.) (YLB)
Cooperative learning, as a model for instruction, is gaining the attention of vocational educators who must prepare students for employment in a workplace that is increasingly focused on teamwork. Many businesses, as well as educational institutions, have adopted the total quality management concepts promoted by Deming, Juran, Crosby, and others. Implementing practices that support these concepts requires that workers have communication, group process, and critical thinking skills as well as technical skills for the occupation. Instructional models that stress individual learning and/or competitive learning do little to integrate the learning of these socially useful skills with academic and vocational learning. However, because 70 to 80 percent of jobs require a complex coordination of effort and ideas (Long 1989) and because the workplace is composed of culturally, economically, and socially diverse individuals, instruction that promotes and develops these skills in cooperation and teamwork is crucial.

Cooperative learning has been defined as "a set of instructional strategies in which students are grouped in teams where they work together toward a common goal" (Long 1989, p. 2). It is a model that provides opportunities for students to explore concepts and develop interpersonal skills that enhance their learning. Research comparing cooperative learning to individual and competitive learning has shown that cooperative learning promotes higher self-esteem among students and more positive attitudes toward others. David Johnson, Roger Johnson, and others (Carson 1990) have reported that students who participate in cooperative learning groups realize greater achievement and greater levels of understanding of the subject matter, have an ability to absorb content that requires higher levels of cognitive processing and critical thinking, and are able to retain what they have learned longer.

Five elements of small group learning are essential to the process. Bruening (1990) identified these elements as follows:

- **Positive interdependence.** Heterogeneous groups learn to trust and depend on each other to achieve mutual goals, which requires sharing of information, resources, effort, and encouragement.

- **Face-to-face student interactions.** Students increase their communication skills and help each other understand how tasks are completed.

- **Individual accountability.** Strategies that effectively promote individual as well as group accountability are desirable. One such strategy bases individual scores on bonus points awarded when all members of the group have met the established criteria. Another strategy uses a team score with extra points for individual improvement.

- **Social skills.** Small group interactions, conflict resolution strategies, round table discussions, and other team building activities provide an opportunity for students to develop the communication and social skills required for work in today's society.

- **Group processing.** Students learn to listen with respect to the opinions of others and to offer constructive criticism.

Implementation of cooperative learning strategies requires teacher training and follow-up. Among the models described by Carson (1990) is the Johnson and Johnson model. This model identifies the decisions involved in planning a cooperative learning group lesson: selecting the tasks, determining the content and accepted performance level, and selecting the social skills students should practice and learn. Size of group, heterogenous representation, and structuring of the tasks are also important elements to consider in the implementation of cooperative learning. Managing the classroom—observing group interactions and activities, providing feedback and reinforcement, and promoting group independence and accountability—may require new skills on the part of the teacher.

This Trends and Issues Alert lists resources that provide information about cooperative learning that can be used by instructors and administrators who are looking to make changes in the way students are taught and instruction is delivered.

**Print Resources**


The importance of collaborative work and writing as preparation for employment is discussed. The article also explores ethical problems with the collaborative approach and describes practical solutions to those problems.


Discusses models for cooperative learning and applications in agricultural education.


This article suggests procedures for structuring and implementing cooperative learning groups, and gives support to the notion that cooperative learning is more effective than straight lecture.


Cooperative learning is presented as a strategy for helping students work successfully alone as well as in competition and cooperation with others.
Johnson, D. W., and Johnson, R. T. Learning Together and
Greene, Gary, and others. Instructional Strategies for Special
Drew, Claudine Paula. "Are You Spoon-Feeding Your Stu-
Dishon, Dee, and O'Leary, Pat W. A Guidebook for Coop-

To curb high first-year attrition rates and motivate active
participation in learning, Bergen Community College
implemented a program of peer teaching-learning and
group inquiry strategies in a preclinical dental hygiene
course. Peer involvement diminished competitiveness,
fostered professional partnerships, reduced anxiety,
increased motivation, and facilitated active involvement in
the learning process.

Greene, Gary, and others. Instructional Strategies for Special
Education Students in Regular Vocational Classes.
(ED 302 015).

Provides detailed descriptions of cooperative learning in
vocational settings, with a summary of research, implementa-
tion considerations, and information sources.

Hall, Richard H., and others. "The Role of Individual Dif-
fferences in the Cooperative Learning of Technical Mate-
rial." Journal of Educational Psychology 80, no. 2 (June

Individual differences in the recall of procedural and
structural/functional information was investigated in si-
tuations in which students studied in dyads or alone.
Dyadic study proved more effective than studying alone
for the 303 undergraduates studied.

Johnson, D. W., and Johnson, R. T. Learning Together and
Alone. 3d ed. Englewood Cliffs, NJ: Prentice-Hall,

Presents the Learning Together/Circles of Learning
Model, identifies five essential elements of cooperative
learning, and suggests steps for structuring it in the

Jones, Karen H., ed. Career Education for Transition.
Athens: Department of Vocational Education, University

Teachers describe their experiences using cooperative
learning with special education students in business,
electronics, home economics, and industrial arts in
technical institutes and middle schools.

Kubota, Kenichi. "Applying a Collaborative Learning Model
to a Course Development Project." Paper presented at
the Annual Convention of the Association for Educa-
tional Communications and Technology, Orlando, FL, February

Presents the results of a qualitative study of the inter-
action between computer-assisted instruction and coopera-
tive learning. The constructivist perspective is dis-
cussed in relation to other learning theories and is
emphasized as the theoretical basis for the study because
of its focus on prior learning, student characteristics,
and the changing role of the teacher.

Journal of Agricultural Education 30, no. 2 (Summer 1989):

Cooperative learning is an effective strategy for involving
students grouped in teams in working together toward a
common goal. It is a way of increasing discussion and
critical thinking without sacrificing achievement.

Nemko, Barbara, and Feichtner, Sheila H. Teaching
Disadvantaged Students: Successful Strategies in Career-
Vocational Education. Rohnert Park: California Institute
on Human Services, Sonoma State University, 1990. (ED
333 186).

With examples from home economics, business, and
distributive education, one chapter discusses using
cooperative learning to help students function as a team,
acquire content knowledge, and gain different perspectives
on a problem.

Putnam, JoAnne W., and Markovchick, Kathryn. "Coopera-
tive Learning and Cooperative Staff Development to
Promote Social Integration." In Education and the Chang-
ing Rural Community: Anticipating the 21st Century. Pro-
cceedings of the 1989 ACRES/NRSC Symposium. Bell-
ingham, WA: National Rural and Small Schools Con-
sortium; American Council on Rural Special Education,
1989. (ED 315 228).

Reports on a cooperative group learning project for 417
middle/junior high school students, including 41 special
education students.