Teaching strategies that promote cooperative learning within heterogeneous, small groups of students, can be effective ways to deal with mainstreamed students in content area instruction. Cooperative learning not only develops academic competencies, but promotes positive peer relationships. To set the stage for cooperative learning, students must become familiar with rules pertaining to individual behavior in small group settings. Five instructional strategies are discussed: (1) the jigsaw, in which students learn a task and then teach it to others; (2) list-group-label, in which students focus on interrelationships of concepts and words; (3) small-group structured overviews, in which students work together to complete missing parts of a partially completed hierarchical schema; (4) survey, predict, read, and revise, in which students brainstorm, predict and revise responses regarding assigned reading; and (5) translation writing, in which group members construct for themselves an abstract of the textbook written in their own words. (CL)
Mainstreamed students in regular classrooms have problems in learning subject matter terminology, organizing information according to major concepts and subordinate details, and completing and comprehending the textbook readings and assignments (___________, 1985). However, classroom teachers often have difficulty structuring their teaching methods to meet the educational needs of the mainstreamed student. What content area teachers need are instructional techniques that can be used successfully and simultaneously with all students, regardless of ability. Teaching strategies that enhance cooperative learning within heterogeneous, small groups of students can offer teachers workable solutions to problems associated with helping mainstreamed students.

Small-group cooperative learning strategies require that four to eight students of differing ability levels are grouped together to work non-competitively towards common goals and course objectives. Cooperative learning leads students to mastery of course content by encouraging student interactions via speaking, listening, reading and writing within the peer-group setting. It can provide all students in a class more opportunity to articulate subject matter concepts and vocabulary, to raise questions, to discuss answers, and to interact with other students.

In addition to the obvious benefit of developing academic competencies, cooperative learning techniques can enable the teacher to use small group situations to promote positive peer relationships. Johnson and Johnson (1980) as well as Slavin (1980) point out theory and research which suggest that positive feelings towards peers can be generated.
through student-oriented cooperative effort. Positive values associated with the efforts put forth by individual students to help other (mainstreamed) students are then transferred to the basic self-image of each individual member of the small group. When a mainstreamed student is allowed the opportunity to become a productive member in a small-group situation, the image of that student begins to improve. The classmates of the mainstreamed student begin to perceive the handicapped student as an integral part of the educational process that occurs in their class.

Setting the Stage for Cooperative Learning

From the beginning, the teacher and the students must understand and agree to a general set of rules pertaining to individual behavior in small-group cooperative learning settings. The following rules for small-group work have been adapted from those developed by Vacca (1981). This set of rules is by no means rigid. Teachers should feel free to revise them in keeping with their own teaching style and the personality dynamics of their students. Especially at the beginning of the year, rules should be reviewed prior to activities to ensure that group members understand what is expected of them. A copy of the rules should be posted in the classroom and students should receive a personal copy to be kept for reference with their class notes.

Rules for Group Members

1. Each member must make a serious effort to do the work.

2. Each member should do the work according to the directions for the assignment.

3. If a member disagrees with an answer to the question or item, the member's own point of view must be defended using specific reasons based on the authority of the text or, where appropriate, the authority of personal experience.
4. No member dominates or withdraws from the discussion.

5. Each member must display a positive and encouraging attitude toward every other group member.

6. Each member must participate and add something to the discussion.

Since all members of the group have a shared responsibility for the outcome of the learning task, the teacher must emphatically communicate the expectation that all students must be actively involved in all group discussions and decisions.

**Five Instructional Strategies**

**JIGSAW:** In the jigsaw strategy (Dishner, 1981), students must first learn a task and then teach it to other students. This strategy not only enables regular students to learn the subject matter well by teaching it, but it also provides a structured opportunity for mainstreamed students to learn subject matter from their peers.

**Teacher Preparation:** Examine a textbook unit or chapter. Select the essential topics to be emphasized. Prepare directed study questions for each topic making sure enough questions are developed so that each student will receive an individual question to answer independently. Since mainstreamed students will often, but not always experience a higher degree of success with easier or more literal questions, pay some attention to matching the difficulty levels of the questions to the ability levels of the students. Divide students into groups. The number of groups will depend on the number of topics to be covered. The number of students in each group will depend upon the number of students in the class.

**Student Activity:** Students are assigned to read pages in a textbook covering a particular topic. They receive one question to answer independently to direct their reading. They meet in a group with other students in the class who are researching the same topic and together, as a group, they discuss the best answers for each of their individual questions. They make note of the most important ideas contained in the readings. After they are satisfied that they have a working understanding of the topic, the group disbands. Each member joins a new group consisting of students who have researched a different topic. Each student, in turn, teaches the information they have learned to the other members of their new group.
Students are, in effect, working members of two small groups for this activity. They belong to a "Research Group" in which they research and discuss answers to individual questions, and they belong to a "Teaching/Learning Group" in which they teach the information they have learned to the other group members.

2. **List-Group-Label.** This strategy was made popular by Professor Hilda Taba of San Francisco State University. For students of varying ability levels who know many concepts and words, but who are confused about their interrelationships, this activity is helpful. It can be easily employed in social studies, science, and mathematics.

**Teacher Activity:** Choose a topic with which the class is familiar. Then, using the chalkboard, overhead projector, or a large piece of butcher paper taped to the wall, lead the class in a brainstorming activity attempting to come up with twenty to thirty words or concepts related to the topic. Write down every word that is suggested. Discuss with the class whether any inappropriate words should be eliminated. Divide the class into small, heterogeneous groups of three or four students each.

**Student Activity:** The students are instructed to select from the main list those words or concepts that seem to be related more closely to one another. They write these words in clusters on paper and label each cluster with a descriptive term. After this part of the activity, the whole class comes together with each group sharing the results of their work and their reasons for grouping certain words together. Since there are no right or wrong answers, all reasonable responses should be accepted. Divergent thinking can be encouraged.

"List-Group-Label" (Taba, 1967) can be used as a prereading "anticipatory set" to spark interest and help students focus on key concepts or as a postreading activity for the purposes of reinforcement and review.

3. **Small-Group Structured Overview:** Teachers familiar with structured overviews have most probably used them as a whole-class strategy in which an overhead projector is used to display a partially completed hierarchical schema and then the students are asked to fill in the missing parts. Unfortunately, when the structured overview technique is employed...
in this manner, mainstreamed students are often less than willing or are unable to participate. For many mainstreamed students, terminology and its relationships to other concepts is at the very root of their learning problem. When the structured overview technique is adapted in the manner that follows, mainstreamed students can clearly benefit.

**Teacher Preparation:** Analyze the pages of the textbook reading assignment and select ten to twenty essential terms. On a transparency sheet write the terms in such a way that they represent an overview of the material to be studied. **DON'T SHOW YOUR TRANSPARENCY TO THE CLASS.**

**Teacher Activity:** Divide the class into small groups making sure each group contains students of varying ability levels. Distribute 3x5 cards to each group. Instruct students that they have approximately twenty minutes to examine the assigned textbook pages and to select ten to twenty essential terms that represent the important concepts. Explain that they write only one term on each card.

**Student Activity:** Students select the specified number of essential terms from their reading assignment. After reaching a consensus, one member writes the terms on the cards. They arrange the cards to represent the "structure" of the topic at hand. After twenty minutes, each group presents to the entire class the terms they selected and explains how their classification and subordination.

At this point, the teacher projects the pre-prepared overhead transparency. Using it as a model, the teacher compares and contrasts the terms and spatial relationships presented by various groups. An alternate approach would be to let each group prepare its own overhead or write the words on a large sheet of butcher paper.

When structured overviews are compiled by heterogeneous groups of students, the mainstreamed student will hear the other students using content terminology in meaningful contexts and will be exposed to the problem-solving processes of others. In this way, mainstreamed students will gain an understanding of the major concepts of the lesson and how they are related.

4. **Survey, Predict, Read and Revise (SP2R):** This strategy is offered as an improvement to the widely recommended study-reading technique "Survey-
Question-Read-Recite-Review" (SQ3R). However, the SP2R adaptation encouraged students to become more ego-involved in the study-reading process.

**Teacher Activity:** Have the students list the headings and subheadings for an assigned reading in a notebook, leaving at least five lines between each heading. Brainstorm with the entire class what kinds of information might be included under each heading. Explain that they are going to perform the identical activity in their small groups.

**Student Activity:** The students will repeat the demonstrated brainstorming process in their small groups, but this time they must record their predictions in their notebooks. Only predictions reached by consensus should be recorded. In order to guarantee the involvement of mainstreamed students, each group member must be required to contribute at least one prediction per heading. However, the group can decide not to select a particular prediction. After the students have completed this portion of the assignment, they read the assigned pages in order to confirm, reject, or modify original predictions. Finally, as a group, the students decide on the revisions or answers that are to be written in their notebooks.

At the beginning of the school year, this process can be repeated once a week. As students work their way through the text and internalize the process, it can be done less frequently. The strength of the strategy lies in the fact that it helps mainstreamed students by offering them a structured format on a repetitive basis. Secondly, it allows them to become active, purposeful thinkers who perceive reading as a decision-making process.

5. **Translation Writing:** It is not uncommon for a mainstreamed student's reading ability to be two or three years below the instructional reading level of the textbook. This technique, developed by Cunningham (1981), directly addresses this problem by converting the textbook content to a more readable level.

**Teacher Activity:** While the rest of the class is working quietly on a seatwork assignment, form a small group that includes one or more mainstreamed students and two or three better readers. Including "able readers" reduces the stigma that teacher is "in the back of the room working with poorer students." Gather the students around a table. Explain that together all of them "are going to produce a readable digest of the textbook." Read a portion (e.g., a paragraph) of the text to the students. As the students
translate their understanding of the main ideas and important facts, type or write what they say. Put their remarks into simple sentences, but at the same time try to remain true to their ideas and expression. Respond to their comments by using such phrases as "Are you saying...Do you mean... If I write it this way, would it be o.k.?" At the completion of the period, make individual copies for each group member to read. The next day have student read the sentences they contributed.

Through this process, the group members construct for themselves an abstract of the textbook that is written in their own language. An added bonus is that the rewritten "text" can be kept on file as alternative reading material for selected students "in next year's class."

One-on-One Learning Activities

Mainstreamed students can also benefit from individualized instruction delivered on a one-to-one basis. Such strategies can be carried out by the teacher, professional aides, or parent volunteers. The latter, especially, need clearly written instructions and rationale if their efforts are to prove helpful. Hopefully, one-on-one strategies designed to help mainstreamed youngsters read and learn better in content area classrooms will be forthcoming in the professional literature.
REFERENCES


