DOCUMENT RESUME

ED 307 242   SP 031 147

AUTHOR   Handley, Herbert M., Ed.
TITLE   Effective Classroom Management. The Basic Element of
                Effective Teaching. A Module for Undergraduate
                Instruction in Teacher Education in the RAFT Program
                at Mississippi State University.
INSTITUTION   Mississippi State Univ., Mississippi State. Bureau of
                Educational Research and Evaluation.
SPONS AGENCY   National Inst. of Education (ED), Washington, DC.
PUB DATE   Aug 86
CONTRACT   400-85-1053
NOTE   67p.; For related documents, see SP 031 144-149.
PUB TYPE   Reports - Descriptive (141) -- Guides - Classroom Use
                - Materials (For Learner) (051)

EDRS PRICE   MF01/PC03 Plus Postage.
DESCRIPTORS   Classroom Environment; *Classroom Techniques;
                Conflict Resolution; *Cooperative Learning;
                Discipline; *Grouping (Instructional Purposes);
                Higher Education; Preservice Teacher Education;
                Problem Solving; *Teacher Behavior; *Teacher
                Effectiveness
IDENTIFIERS   Mississippi State University; *Research Applications
                for Teaching Project

ABSTRACT
                This module, developed by the Research Applications
for Teaching (RAFT) project, introduces the undergraduate student to
practices of teachers in effective schools which facilitate the
climate for learning in the classroom. Used with Canter's materials
on assertive discipline, the preservice teachers should have an
opportunity to reflect carefully upon current problems in classroom
management in typical public schools. Brief case studies illustrate
problems that may arise in the classroom that require a thoughtful
solution. This module provides instruction in grouping within the
classroom and in provision for cooperative learning. (JD)

EFFECTIVE CLASSROOM MANAGEMENT

THE BASIC ELEMENT OF EFFECTIVE TEACHING

A Module for Undergraduate Instruction in

Teacher Education in the RAFT Project

at Mississippi State University

Department of Curriculum and Instruction

College of Education

Mississippi State University

EFFECTIVE CLASSROOM MANAGEMENT

THE BASIC ELEMENT OF EFFECTIVE TEACHING

A Module for Undergraduate Instruction in Teacher Education

in the RAFT Program at Mississippi State University

by

Herbert M. Handley, Editor

Department of Curriculum and Instruction

College of Education

Mississippi State University

August 1986

HOW TO USE THIS MODULE

This module on classroom management is planned to introduce the undergraduate student to some teacher practices which have been demonstrated to be practiced by teachers in effective schools to facilitat the climate for learning in the classroom. Used in conjunction with Canter's materials on assertive discipline, the student should have opportunity to reflect carefully upon current problems in classroom management in many schools. These preservice teachers should have more alternative strategies for coping with these problems in contemporary classrooms.

Managing behavioral problems of students in the classroom is the major area in which students in the RAFT program express lack of confidence. With the combined efforts of psychologists and classroom teacher specialists in future activities, we should be able to plan a sequence of instruction in classroom management that is more meaningful to the students in terms of the real world.

TABLE OF CONTENTS

Lesson 1: Classroom Management

Objectives

The student will:

1. Recognize the kinds of instruction given on classroom routines and management at the beginning of the school year.

2. Describe the most effective arrangement of furniture to
   a. promote general discussion.
   b. discourage peer group interaction.
   c. teach basic concepts.

3. Describe at least three uses of bulletin boards.

4. Identify at least four factors associated with the emotional climate of a classroom.

5. Describe the teacher's responsibility relative to the physical environment of a classroom.

6. Identify six behaviors identified by Evertson as associated with effective management in junior high classes.

7. Describe six variables associated with developing student accountability.

MANAGING ENVIRONMENTS FOR LEARNING

Since the student spends most of the day in school, the schoolroom should be a pleasant, supportive place to work. The environment for learning includes both the physical and emotional features of the classroom as well as planning and scheduling of instructional events, movement of students and materials, and other factors.

The Physical Environment

The physical environment is the framework for learning. It includes regulating such matters as pollution, traffic, temperature, lighting, volume control, arrangement of materials and supplies, seating, activity or research centers, audiovisual equipment, bulletin boards, and many unexpected items. Everything must have an appropriate place and must be returned to that place when it is no longer actively involved in the current learning situation.

Preparation. Before school begins, the teacher locates all the books, materials, supplies, curriculum guides, and equipment that is expected to be used. Appropriate filing or storage systems are adopted so that all of the materials are kept in an orderly manner. Books carefully placed on a shelf communicate a different attitude toward learning than does a stack of the same books arranged in a careless manner.

Teachers make a list of materials and supplies which are needed and are not available. This list should be as descriptive as possible, identifying potential sources for the materials and the expected price. The teacher may not be able to secure the new materials on the list

immediately for causes beyond the teacher's control. It is sure, however, that no such materials will be secured if a list is not made.

Teaching Aids. Any device employed by the teacher to communicate a concept is a teaching aid. Historically, the oldest aid in the classroom is probably the chalkboard. Many teachers now are using videotapes instead of films for classroom purposes since the videotapes are so much easier to manage in the classroom. Other aids of importance are overhead projectors, flannel boards, maps, and charts which may either be commercially prepared or made by the instructor. Storage of such teaching aids is a major problem in rooms with limited storage space. Also, appropriate check-out procedures for securing audiovisual materials from central storage spaces must be thoroughly explored. Student helpers need to be trained to assist the teacher in using audiovisual materials appropriately. The room should be so arranged that students can switch from another activity to viewing visual materials without a great loss of time; i.e., students should be appointed to close the curtains when needed, to darken the room, and so on.

The transparency has become an indispensable teaching aid in many schools. Teachers who can't get enough of the commercial material make them out of plastic sacks. One roll of plastic sacks will last a whole year. Diagrams can be drawn on these sacks with felt tip pens. Use of transparencies provides a single focal point upon which the class can center its attention. This technique cuts down on small class interruptions and serves as one of the best methods to focus attention.

Audio tapes are also very useful in secondary classes. Not only do

they serve as a media to bring contemporary material into the classroom, but the tapes also serve as an excellent media for recording the responses of students in classroom situations. For example, one use of audiovisual tapes in science groups is to serve as a record of observations made by students as they pursue an experiment. The students can relisten to the tapes and find out how they went about solving the problem.

Bulletin Boards. Appropriate use of bulletin boards can enhance the appearance of the classroom considerably. They can also serve as an important instructional device. One who is not very artistic can find helpful suggestions in many books and pamphlets. The important criteria for bulletin boards are freshness and relevance. A good bulletin board is more than a decoration.

A good bulletin board takes a great deal of work. Hence, the materials should be stored well and used over another time. The materials can be stored in manilla folders by subject and filed. Large items can be sorted in art folders.

Bulletin boards belong to the students. Hence, commercially prepared materials should be avoided. At least one bulletin board in the room should be reserved for students' work--papers, art work, or any appropriate materials. The students' work should be rotated so that different students will get this recognition. The papers can be bordered in colored construction paper to provide some color to the decoration. Teachers who want to get the best performance from their bulletin boards assign the responsibility of making bulletins to groups of students. The students plan and prepare the bulletin boards. They

usually select their own topic or work on a theme su gested by the class.

Finally, bulletin boards serve as excellent news sources for newspaper clippings, science newsnotes, and other recent developments. The clippings are contributed by all the class members.

Seating. Seating arrangements are a major factor in the physical environment of the classroom. Some teachers place their students in alphabetical order to facilitate the collection of papers. Others prefer grouping to fit the individual needs of students; i.e., some students must sit closer to the board because of visual problems. Whatever the system for seating students, a seating chart is essential.

Seating arrangements are usually left to the individual teacher. Many still use the traditional rows. Rows of students facing the teacher in the front of the room communicate the concept that the teacher is the center of instruction. This arrangement does facilitate better classroom control in rooms with less motivated students. Some teachers turn their rows of seats diagonally so students are facing the projector screen and have the light coming over their left shoulder.

Some teachers break up a class into circles. With this arrangement, the teacher does the walking instead of the students. This plan also works well when the students are seated around large worktables. Such circles in the seating plan facilitate effective group work.

The "U"-shaped arrangement is effective for conducting classroom discussions. The teacher's desk or workplace is placed on the same level with the students' desks so that the teacher is a member of the

work group fro.: a psychological perspective. More student discussion takes place in groups where the teacher is on an "even level" with students in seatin rrangements.

Separate tables and chairs are preferred as classroom furniture. This type of seating allows the students to form either large groups or small groups when needed for instructional purposes. The worst arrangement possible is for seating to be permanently attached to the floor. Such seating arranged in straight rows practically insures that little or no student discussion will take place in the classroom. Some student desks are built into square patterns so that small group arrargements can be made in the classroom without a great deal of trouble.

Temperature. Temperature control is more easily handled in schools with central temperat' re control. Classrooms should be kept around 68-70 degrees ahrenheit. If the teacher has no control over the temperature, then teachers should work to make the best of a bad situation.

Volume. Terchers should close their doors at the beginning of a period and keep their voices relatively low in consideration of the other classes. Students follow example on voice levels. The teacher should define the noise level expected in the class and should insist that students respect it. Work, such as laboratory activities, requiring a higher noise level should be separated from the active instructional area as far as possible.

The Emotional Environment

The environment of a classroom also has emotional overtones. These

subtle characteristics are related to attitudes, tempo, humor, and the sound of voices.

Voice. If the teacher's voice is relaxed, natural, and positive, the voices of the students will be likewise. If the students shout, the teacher often tries to outshout them. In such situations, noise pollution arises. The important criteria for judging the allowability of noise is purpose. If the learning activity requires noise, then noise should be encouraged. If noise impedes the instructional program, then it must be stopped.

A silent classroom is generally a suspicious classroom. There are a few situations requiring silence--reflective thinking, short reading sessions--but the classroom that is constantly quiet is usually too inhibited to do much of anything except promote conformity. In most classrooms, there is a low hum of activity. While the teacher is helping some students, others are speaking in soft, natural voices.

A teacher shows a student how much regard he/she has for people every time he/she speaks. The use of the voice, the kind of assignments made, and the way each lesson is prepared and presented show how highly a teacher regards people. The psychologically healthy teacher does not need to resort to sarcasm, ridicule, artificial courtesy, or any other means of manipulation. The secure teacher can afford to meet students on the same level.

Expectancy. The word "expectancy" is found much in the literature related to school climate these days. It implies not only a cheerful, optimistic frame of mind, but a deep regard for people, plus a realistic appraisal of their abilities. The effective teacher knows

what to expect from his/her students when they are producing their best performance. The effective teacher makes realistic assignments and sets high work performance standards for himself/herself as well as for the students. The effective teacher never assigns busywork.

Tempo. Tempo is a subtle element of atmosphere. The teachers and students should be matched in tempo. The accelerated classes which move along with breathtaking speed should not have teachers who travel at a slow pace. Average students need very flexible, discerning, and adjustable teachers who are able to perceive the needs of the many kinds of students who fall in the vast middle range. Teachers of slow students need to genuinely enjoy the deliberate pace of the slower learners.

Humor. Another useful element in the classroom is humor. In a well-structured, purposeful, and businesslike atmosphere of an effective classroom, there are many appropriate opportunities for humor. It relaxes the classroom tensions and facilitates teaching. Most teachers recognize that a well-developed sense of humor in students most often relates to a healthy personality and good thinking.

In general, the effective classroom has an atmosphere that facilitates the learning of all individuals in the room. A pervasive climate exists between students and teacher which reflects a "I wish you well" concept for all concerned.

Lesson 2: Organizing for Classroom Management

Objectives

The student will:

1. Identify the clusters of management practices found by Evertson and Emmer to differentiate between more and less effective teachers at the junior high level.

2. Summarize planning for management before the year begins and during the early school year.

3. Describe some simple rules for managing inappropriate behavior.

4. Outline procedures for developing student accountability.

5. Observe procedures used in schools with assertive discipline programs.

Activities

The student will:

1. Discuss the simple rules that are outlined on cartoon transparancies for handling misbehavior in the classroom.

2. Discuss the precursors and outcomes of specific case studies illustrating conflict between teachers and students.

3. View three 30 minute videotapes presenting the concepts of assertive discipline.

A STUDY OF CLASSROOM MANAGEMENT AND ORGANIZATION

Evertson and Emmer (1982) conducted a study of management patterns at the junior high level in seventh- and eighth-grade mathematics and English classes. In this study, 26 mathematics teachers and 25 English teachers were each observed in two classes. Subsamples of more and less effective teachers were identified. These two groups were observed, and an intensive study of their management behaviors was made. The following clusters of practices were found to differentiate between more and less effective teachers:

1. <u>Instructing students in rules and procedures</u>. Even though all of the teachers had rules and procedures, the more effective managers had more complete systems and were more successful in installing rules and procedures. Better managers were more explicit about what was desirable behavior.

2. <u>Monitoring student compliance with rules</u>. The more effective teachers were rated as being more consistent in managing behavior. They were less likely to ignore disruptive behavior and were more likely to use the rules and procedures when giving feedback to students. In short, effective teachers noted and reacted to departures from acceptable classroom behavior.

3. <u>Developing student accountability for work</u>. More effective managers kept better track of student progress and completion of assignments. They had stronger and more detailed accountability systems.

4. <u>Communicating information</u>. Effective managers were more

successful in presenting information clearly, in giving directions, and in stating objectives. They were better able to segment complex tasks and break them down into step-by-step procedures. They also were assessed as having more understanding of their students' learning skills than the less effective managers.

5. <u>Organizing instruction</u>. More effective managers wasted less time in their activities and had more on-task time.

Suggestions for Effective Management

Recommendations for planning effective management systems are related to the following areas: (1) planning before the year begins; (2) managing during the first few weeks; and (3) key behaviors needed in implementing and maintaining a management system.

Planning Before the Year Begins

The planning phase of classroom management has three major components: (1) determining expected behaviors; (2) translating expectations into procedures and rules; and (3) identifying consequences.

<u>Step 1: Determining expected student behaviors</u>. Communication of a clear set of expectations about appropriate behavior to their students is a major characteristic of effective classroom managers. Desirable behaviors frequently vary according to classroom activities.

Activities such as seatwork, small group work, and whole-class instruction require very different student behaviors. In seatwork, students work independently, follow directions, and get help when needed. In seatwork activities, students know what to do after completion of their work. Whole-class instruction requires students to

sit and listen to the teacher or to other students, answer questions when asked, wait their turn to respond, and, frequently, raise their hands to volunteer information or ask questions. In small group work, cooperative effort is required with students watching to control the noise level, respecting the rights of others and doing their part of the work load.

The expectations of students in a junior high or middle school setting are identified later. These materials need careful study by beginning teachers so that problems can be anticipated and avoided.

Step 2: Translating expectations into procedures and rules. The purpose of classroom rules is to call students' attention to areas of behavior and to create a strong expectation about what is or is not acceptable. Some typical rules are:

Be polite and helpful.

Respect your fellow students and adults.

No hitting, running, and shoving.

Raise your hand before speaking.

Keep your desk and the classroom neat and clean.

Listen when others speak.

Be in your seat when the bell rings.

Bring your materials every day.

These rules are only examples and are not meant to be a definitive list. Some teachers manage very well with only a few general classroom rules; others use more rules, some that prohibit certain behaviors they find objectionable or disruptive. Typically, the rules are posted somewhere in the classroom so that students can see them, and the

teacher can refer to them when necessary. Ideally, stated and posted rules function as cues to elicit appropriate behavior, or elicit a covert response inhibiting the inappropriate behavior.

Step 3: Identifying consequences. Although children may follow rules and procedures simply because they have been asked to do so, eventually some incentive or reward is necessary to maintain cooperation. By planning consequences ahead of time, teachers increase the likelihood that they will use reasonable ones, and they avoid the inconsistencies that occur when confronted by events for which they have no immediate response. While it is not possible to prepare for all occurrences in the classroom, it is possible to anticipate a substantial number of them.

Teachers can review their rules and procedures and consider a key question for each: What happens to students when they follow or fail to follow a procedure or rule? Positive consequences should follow appropriate behavior, but teachers should not spend their time being "praise machines." Consequences of appropriate behavior are usually naturally reinforcing. If students raise their hand, they will get to speak. If the room is cleared orderly, the group will get to lunch on time.

Careful attention must be paid to what will happen when students behave inappropriately. The teacher's response can range from imposing a penalty on an offending student (such as assigning detention for tardiness) to ignoring an unobtrusive and innocuous procedural violation (such as an inappropriate callout during a recitation). Handling inappropriate behavior well, and minimizing its recurrence,

depends on careful consideration of what responses are available to the teacher and what is reasonable in the context in which the inappropriate behavior occurs. Teachers should review their procedures and rules and plan how they will manage deviations from them.

In some cases, particularly for major rule violations, some system of penalties will be needed. If some negative consequences are allowed to continue, classroom processes will be interrupted and a poor learning environment will result. Commonly used penalties include detention, "time out" in a restricted area away from classmates, demerits or checks, sentences or some other repetitive activity (laps in physical education), and denying or withholding a privilege (loss of recess time, being last to leave the room at lunch, or losing "whispering" rights). When a check or demerit system is used, students receive a penalty after accumulating several demerits in a given period of time. The first demerit serves as a warning. Such systems can be effective in helping students to learn to control their own behavior, but they require that the teacher have an efficient recordkeeping procedure. Many schools have schoolwide penalties for particular behaviors (detention for tardiness, suspension for fighting). In these instances, teachers need to follow school procedures.

Penalties are useful in deterring students from violating major rules and repeatedly ignoring procedures. However, penalties are neither necessary nor desirable for most run-of-the-mill inappropriate behaviors that occur in classrooms. Teachers should reserve penalties for major inappropriate behaviors. Minor procedural violations--such as calling out, being out of seat, whispering to a neighbor, heading

papers inappropriately, forgetting materials, and leaving trash on the floor--should also have a consequence, but not necessarily a penalty.

Maintaining an Effective Classroom Management System Throughout the Year

Monitoring student behavior. The T zone, the front row and the middle section of a classroom, is the area receiving most of the teacher's attention. Most of the student problems occur outside the T zone. Teachers need to learn to monitor student's behavior outside this zone, as well as in that region. Signs of potential problems can be evidenced by confusion, copying, completing work very early, or unusually slow progress of students. When working with a small group, teachers must learn to monitor the activities of the rest of the class by scanning the room frequently. Teachers should move about the room during seatwork and check on student progress rather than becoming engrossed w..th one or a few students. Finally, teachers must be careful to keep lines of sight open and have students avoid milling about the teacher's desk and obstructing the view.

Managing inappropriate behavior. Inappropriate behavior thrives when the teacher ignores it. Effective teachers use direct, simple means of dealing with students' failure to follow procedures or rules. Generally speaking, effective teachers avoid over-reaction and emotionality; rather, the student is regarded as simply not having learned the correct procedures. The perspective that seems most useful is helping the student learn how to behave appropriately.

Effective managers use these common and simple procedures:

1. Ask the student to stop the inappropriate behavior. The

teacher maintains contact with the student until the appropriate behavior is correctly performed.

2. Make eye contact with the student until appropriate behavior returns. This is suitable when the teacher is certain the student knows what the correct procedure is.

3. Restate or remind the student of the correct rule or procedure.

4. Ask the student to identify the correct procedure.

5. Impose the consequence or penalty of the rule or procedure violation.

6. Change the activity. Frequently, off-task behavior occurs when students are engaged too long in repetitive, boring tasks or in aimless recitations. Injecting variety in seatwork, refocusing discussion, or changing the activity to one requiring another type of student response is appropriate when off-task behavior spreads widely throughout the class.

Developing Student Accountability

Effective teacners teach students to be responsible for participating in class and completing their assigned work. There are six aspects of developing student accountability.

1. _Clarity of work assignments_. The teacher must have specific expectations regarding the quality of student performance, covering such aspects as the form of student work, specifics regarding neatness, completeness, due dates, and procedures for make-up work. These variables are different for different teachers. The teacher should decide what is reasonable, given the working context, and what will aid students in the development of good work habits. Then these

requirements should be communicated to the students.

2.   Communicating assignments.   Assignments should be clear so that every student knows what to do.   Establish a routine for posting assignments in a particular place.   Grading procedures should be spelled out to students so that they know what the teacher considers important in evaluating work.

3.   Monitoring student work.   Once assignments are made and students begin work, the teacher should continue to be aware of student progress.   This is best done by the teacher circulating throughout the room.

4.   Checking work.   Once assignments are completed, the teacher needs a system for checking work.   Assignments that have specific answers may be checked by students.   A procedure is also needed for students to turn in their papers.   Certain assignments may be put in a basket at the front of the room, and a certain area may be designated for collecting and returning assignments of absent students.

5.   Giving feedback to students.   It is through practice and feedback that most instruction begins to pay off in learning.   When students receive information about their performance, they obtain the basis for improvement.   Regular routines for checking work and returning it to students are useful.   The feedback older students receive is usually tied in with a grading system; therefore, the teacher needs an overall basis for grading consistent with the instructional goals.   One technique is to have students keep a record of their work in each grading period. The teacher may provide students with a ditto sheet that has space for recording assignments, test

grades, project grades, or any other course requirement. Students then maintain this record throughout the grading period. Such a procedure is effective in helping students understand the relationship between their performance and grades. It is also a useful tool for communicating with parents about their child's performance.

6. <u>Clarity in instructions</u>. Clear instruction of academic content helps students succeed and learn; unclear instruction can provide failure, frustration, and task avoidance. Clarity is aided by a number of factors. First, the teacher must have a good idea of what is to be taught and how. Second, the teacher must communicate information so that students understand it. Thus, the teacher's awareness of student comprehension is critical. Third, the precision and clarity of the teacher's oral expression are important. Sloppy speech habits lead to vagueness and confusion. By writing words and their definitions on the board whenever a new word is used, teachers will help students understand the vocabulary. Teachers whose presentations tend to wander, or who sometimes skip important parts of a lesson, may find it helpful to put a short outline of the topic on the chalkboard.

Lesson 3: Grouping

Objectives

The student will:

1. Recognize the importance of knowing the following:
   a. the purpose of developing a group.
   b. criteria for selecting group members.
   c. expectations of group behavior.
   d. the product expected from the group's work.

2. Differentiate between large group, small group, and individualized instruction.

3. Compare the advantages of cooperative and competitive grouping.

4. Consider the importance of cultural heritage in grouping.

5. Consider the research relative to homogeneous and heterogeneous grouping.

6. Describe some ways to deliver individualized (true) instruction.

7. Describe the behavior of the teacher when working with small groups.

8. Describe at least five types of grouping.

EFFECTIVE GROUPING PRACTICES

Though grouping children for instruction within the classroom structure is a common practice in elementary education, teachers at the secondary level traditionally have grouped students less often. With the rising consciousness of the need for reteaching and for enriching learning experiences for students, however, many secondary level teachers are now working with more grouping strategies in their classrooms.

Instruction in classrooms is offered in one of the following formats: (1) individualized; (2) small group; or (3) large group. By convention, large group instruction is that which is offered to the total classroom group. Small-group instruction can be done with from two to any number of students fewer than the total class. Individualized instruction, of course, is done on a one-to-one basis.

Handley (1982) found that students' achievement in the elementary classroom was significantly correlated with the amount of small group instruction. Student achievement was inversely related to the amount of time the teacher spent in one-to-one instruction. These data do not imply that individualized instruction hinders achievement. Rather, when students require more individualized teaching, they are usually m in 'efic.ent in their basal skills.

.cent research has recognized the superiority of large group instruction in promoting instruction in some areas, particularly mathematics. In areas such as reading, however, better achievement is observed when students are taught in small grouping patterns. These

observations imply that differing grouping patterns are better for instruction in varying subject areas.

Individualized Instruction

There are several instructional systems which can be used effectively for individualized instruction. In the 1960s, teaching machines and programmed texts were very popular formats for individualized instruction. These did not survive the classroom marketplace for various reasons, some of which were philosophic and some were economic. Generally, commercially prepared hardware and software to use for individualized instruction were costly and were viewed as detached, lonely ways to learn by teachers. Teachers did not have the skills for directing programmed instruction in such a way that meaningful teacher-student interactions could be effected.

There was a renewal of vigor of interest in individualized instruction in the 1970s largely because of the competency-based education movement. Born of a growing acceptance of "accountability" by both educators and members of the private sector, programmed instruction became a popular concept again. It took the form of the "learning module" or "learning activity packet" (LAPS). These materials contained specific behavioral objectives and accompanying instructional materials which allowed the students to master learning tasks with only a minimum of teacher guidance. The students worked at their own rate, had their assignments checked, and then did remedial activities as needed. This system of instruction is usually limited to the mastery of literal or basic knowledge concepts. Prepacked materials, however, contain a high level of direction and usually do

not provide an opportunity for students to make decisions. Individualized learning by LAPS can promote the growth of self-direction and self-reliance in students.

Computer-assisted instruction has recently become an important instructional system for use in individualizing instruction. Its major limitation is that it is costly. With the improvement in technology, however, the cost of computers is diminishing rapidly. Computer instructional technology currently offers opportunities for diagnosing learners' strengths and weaknesses and for matching these with appropriate instruction.

Research by Enochs, Handley, and Wollenberg (1986) demonstrated that computer-assisted instruction can promote achievement gains more effectively than more conventional systems of instruction, particularly if the learning style of the student is taken into account. Students who like to learn independently and who are more abstract thinkers tended to learn more effectively through use of computer-assisted instruction, while more socially-oriented students tended to achieve more in classrooms featuring interactions between students and teachers. These data suggest that computers can offer a very viable alternative to instructional systems currently in operation and may well serve the instructional needs of students with learning styles congruent to the instructional format of the machines.

Large Group Instruction

Recently, large group instruction or total-class instruction has been promoted by advocates of direct instruction who believe it to be an effective strategy for increasing student achievement. Direct

instruction usually occurs in those instances where the teacher uses factual questions and controlled student practice to teach a large group of pupils. Advocates of large group teaching assert that teachers have better classroom control than when instruction takes place in either small group or individual modes.

Large group instruction does not allow to any extent the individualization of instruction. It is also difficult to develop higher order thinking skills in students in large group settings. Large group instruction also has limits relative to the amount of tactile or hands-on experiences that can be offered to the group.

Advantages of Group Instruction

Effective teachers have learned that subgroup instruction provides opportunities to reach individual children. They strive, therefore, to challenge each pupil by providing a balance of learning activities that occur in large groups or subgroups as well as in individualized settings. In the final analysis, group instruction enables the teacher to:

1. Provide pupils with opportunities to acquire socialization skills needed for participation in a democratic society.

2. Make efficient use of teacher time and effort.

3. Utilize modes of instruction that require pupil interaction.

4. Provide for individualized learning that occurs in a group rather than in an isolated setting.

Because the majority of beginning teachers will find themselves in a self-contained classrcom, with or without modifications, they should be prepared to plan and to instruc, secondary students in both large

and small groups. The following section will provide criteria that can
be used to select pupils for a particular group.

CRITERIA FOR ORGANIZING STUDENTS IN GROUPS

Some of the criteria used for grouping purposes at the secondary level are: (1) age, (2) gender; (3) ability and achievement; (4) learning style; (5) psychomotor development; (6) cultural background; (7) interests; and (8) personal and social adjustment.

Age as a Grouping Criterion

Secondary teachers in some subjects (art, foreign language, physical education, home economics, all elective areas) may have students in their class whose ages range over four years or more. Maturation rates for these students, of course, vary considerably. Hence, teachers find it important to group according to age within the class if biological or social maturation is important relative to the objectives of the course. In physical education, for example, it would be unwise from a legal point of view to pit seventh graders against tenth graders in skill development exercises. In other subject areas, it may be wise from a psychological point of view to group students in their relative age group. In mathematics, it is often wise to do some chronological age grouping so that group interactions can be maximized. If age grouping is practiced, it should only be done for some lessons. Students often learn better from varying age group peers than they do in classes homogeneously grouped according to the age variable.

Gender as a Grouping Criterion

In certain areas, such as science, males tend to dominate the instructional activities. Effective teachers have found that grouping students according to gender during the adolescent years may serve to

promote the achievement of the students, particularly the girls. If boys and girls work together in problem-solving activities, though the girls have as good ideas as the boys, they tend to be shunted off to doing recordkeeping activities, housekeeping activities, or routine chores, whereas the boys are more actively involved in practicing problem-solving skills or the construction of appropriate apparatus. If girls work in a group by themselves, they get opportunities to plan, to build, and to do science.

Areas of the curriculum, such as home economics and agriculture, traditionally were restricted to one dominant gender group. Recently, however, such stereotypes have been refuted. Both boys and girls excel in both home economics and agriculture. Care must be taken so that youth are not stereotypically grouped according to gender, but if such grouping improves the productivity of youth, then grouping by gender is a supported practice.

In some areas of the curriculum, such as physical education, it may be psychologically damaging to have boys and girls compete. Most seventh grade girls can outperform their male counterparts in sports activities. Male seventh graders may find this situation to be a threat to their macho image. Boys and girls must learn together in certain activities in order to work out their social and personal adjustment problems; but they may be segregated by gender for some of their work.

Ability and Achievement as Grouping Criteria

Grouping by achievement and/or ability is one of the most traditionally honored practices in both elementary and secondary

schools. In secondary schools, however, such grouping practices are used to assign students to the overall classroom group rather than to subgroups within the classroom. To the contrary, grouping according to achievement level within the classroom is a common practice.

Because of the growing need to do remedial instruction for some students while providing enrichment activities for others, secondary level teachers are now grouping according to achievement within their classrooms. When an instructional sequence is offered and a test is given, some students do not perform satisfactorily. If the sequence of learning involves basic concepts whose mastery is needed for further progress in the subject, then the student must be retaught. Other students, by their performance on the test, showed they had mastered the material on the first trial. Most effective teachers then separate the large group into at least two smaller groups for some instructional activities. This grouping is discontinued as soon as possible so that students will not feel stereotyped as being members of the "slow" or "fast" group.

If students are subgrouped according to achievement or aptitude, then the subgroups should be taught differently; i.e., different types of instructional materials and methods should be used for working with the groups. Otherwise, there is no justification for the creation of subgroups according to this criteria. The subgroups must have differentiated assignments for the subgroups to work effectively.

On the philosophical level, some contend that ability grouping that segregates students into high, average, and low groups prevents pupils from interacting with others who may be more or less able than

themselves.   Thus, the more able pupils do not have an opportunity for social contact with others who are less capable. The criticism strikes at the failure of intellectual ability as a criterion to provide pupils with a group experience that is consistent with society itself, where there is a mix of abilities.

Most educators, while arguing the wisdom of total homogeneous grouping of students according to ability levels, quickly point out that some such grouping is essential, particularly within classroom structures, if mastery of certain specific skills is required.   Again for emphasis, this practice of grouping for instruction in basic or minimum skills should not develop into a static pattern.

Learning Styles as a Grouping Criterion

As noted by Dunn and Carbo (1979), research findings show that between 20 and 30% of young adults learn more efficiently through the channel of listening, 40% learn better through visual means, and the remainder depend on tactile senses, mobility, physical activity, and touching as primary means of learning.   An individual's style of learning differs from his/her intellectual abilities.   The minds of some individuals operate in concrete spheres, others in abstract spheres, and some in both spheres, whereas some people process best through deduction, others through induction, and some through both channels.   Accordingly, one's learning style may be both nature and nurture in its roots because the link between learning style and environmental demands lies within the power of the mind.

Learning styles ! ve much implied value.   Learning styles serve as a basic framework for implementing a theory and practice of

instruction. Recognition of students' variations in learning styles aids the teacher to understand why some students do not succeed and what can be done to improve the instructional process. Since certain students achieve well only through selected methods that may not be effective for others, it is necessary to subgroup students within a class so that optional modes of instruction can be provided. Carbo's research in 1980 clearly dem.. .strated in instructional sequences where subjects were given the opportunity to learn according to their own style of learning, retention and academic achievement were highly enhanced.

Use of learning styles as a criteria for within-class grouping is a relatively new concept. To use this practice effectively, teachers must map out the preferred learning styles of their students, devise optional instructional strategies planned to complement different learning styles, assign students to groups offering the appropriate instructional activities, and monitor the learning process to insure that the appropriate instructional sequence has been followed.

Learning style inventories for assessing the preferred learning style of individuals have been developed for people of all ages. The Canfield Learning Style Inventory (1978) is one of the most widely used instruments for studying learning styles of adults and adolescents. This instrument measures the preferred conditions of learning relative to work with peers, organization, goal setting, competition, relationship to instructor, desire for independence in learning, and respect for authority in learning. Canfield's instrument also assessed favored content for learning relative to numeric,

qualitative, inanimate or people associated learning. Modes of learning including reading, listening, iconic, and direct experience are assessed for dominant patterns. Then, the student's predicted level of performance (expectancy) is also determined. When such data as that given by the Canfield Learning Style Inventory are available, teachers can subgroup their students effectively and plan alternative strategies for learning that are suited to the learning styles of the students.

Psychomotor Development as Criteria for Grouping

Grouping students on the basis of psychomotor development is seldom used outside of physical education and special education classes. Nevertheless, this aspect of the student's development merits the teacher's careful attention. Frequently, the pupil's physical status affects his or her acceptance by other pupils. Certainly, the student who is strong academically but who has poor muscular coordination is not apt to be a popular choice for activities that require physical dexterity. This deficiency may well carry over into the student's academic activities as well, because no amount of academic prowess can compensate in a group of adolescents that values physical skill. Students with auditory, visual, and speech problems, as well as those with illness that impair their psychomotor conditions, require the careful attention of the teacher when group membership is considered. Such students need to be in the group that provides them with empathetic--not sympathetic--support.

Sheer physical size is a frequent determiner of whom the leaders and followers are to be in the class. Teachers should be aware that

more physically mature students at the secondary level are usually assigned leadership roles. Careful instruction should be given that leadership is composed of more enduring qualities than mere physical size. In forming groups, the teacher should be careful to insure that small subgroups will not be dominated by those who have achieved more mature physical development. The teacher should always be conscious that social adjustment of students is strongly conditioned by the degree to which the group accepts and values the psychomotor differences of its individual members.

Cultural Background as a Criterion

Experienced teachers who are sensitive to the importance of various cultures represented in the classroom find many ways for pupils to feel proud of their heritage and to enrich the school programs with their contributions. Teachers of social studies, for example, recognize the strong enrichment opportunity provided by grouping students whose cultural background is different from the group majority with members of the culturally dominant group. If the minority class member has language problems, then practice with the dominant language is provided in this grouping experience. The culturally-different student's background also allows him/her to view problems from a different perspective or point of view. Such perceptions are valuable when the group is doing comparative studies of social issues or political developments.

Personal and Social Adjustment as a Criterion

Groups are profoundly influenced by the degree and extent of the personal and social adjustment of their members. Even experienced

teachers are heard to say, "Since Bill and Jane were absent, we had a very good day today." It is quite obvious that Bill and Jane have either social adjustment or personal problems. Since teachers are not trained as therapists, they should not attempt to be diagnosticians who prescribe group therapy strategies for students. Teachers, however, can contribute to the personal and social adjustment of students by understanding the dynamics of group interaction and the importance of keeping group membership flexible. Students develop images of themselves in part from the groups in which they are members. Keeping a student in the same group day after day may be detrimental to his/her personal adjustment. Group memberships, then, whatever their purpose, should be fluid and should be considered temporary.

Interest as a Criterion

Students' academic interests are to a large extent affected by the degree to which they appreciate the intrinsic value of what they are expected to learn. Such interests are also affected by the learning atmosphere of the classroom. Teachers who are skillful in group management frequently plan subgroups which provide pupils with a variety of learning activities. To provide pupils with a variety of teaching and learning modes, the teacher should have available a wide repertoire of activities and should systematically introduce them to the group. The expected outcome is that students will become increasingly self-selective in matching activities with their special interests.

COOPERATIVE AND COMPETITIVE GROUPING

Recent research has shown that the most effective way of promoting positive attitudes toward minority group members in the class or those of the opposite gender in intermediate grades is to promote cooperative learning, rather than competitive learning. Cooperative learning occurs when a group is given a common examination or project. They are told that everybody in the group will receive the same grade or level of evaluation. The task of the higher achieving members of the group is to teach the lower achievers so that the grade of all group members will not suffer. In competitive learning, the students compete with each other for the grade given. In this type of situation, only a certain number of top grades are issued. The students work against each other to secure the top grades.

In the cooperative learning situation, the teacher may take up a paper from only one member of the group. The content of that paper determines the mark of everybody in the group. This type of assignment stimulates much intergroup interaction. Consequently, researchers have discovered that attitudes toward all the members of the group improve significantly as a result of such interactions. If there is only one black student in a group of five students, all nonblack group members improve in their attitudes toward the minority group member. If one girl is in a third grade group with four boys, the attitudes of the boys improve toward the girl as a result of such group work. Cooperative grouping also serves to improve the overall achievement of the students in the group, and, as far as can be determined, does not

lower the achievement of the better prepared students.   Actually,   the
higher achieving class members have a unique opportunity to do tutoring
in   the   cooperative   learning   situation.   This   experience   has   been
demonstrated   to   be   highly   effective   in   promoting   more   positive
attitudes and achievement.

Research on the Effectiveness of Cooperative Learning

In their book, Learning Together and Alone, David and Roger Johnson
include   a great number of references supporting their contention   that
cooperative   group work in schools is superior in almost every   way   to
the more traditional competitive environment of most classrooms.   They
maintain   that while competition and individualization both have   their
place when correctly used, more cooperative group activities are needed
(Johnson & Johnson, 1984).

The   following   is   a partial summary of the research   they   quote.
(Cooperative learning is almost synonymous with small group instruction
as it is used here.)

Students in cooperatively structured discussion are typically   less
tense   and   more   ask oriented than students in competitive   structured
discussion.

Students   in   cooperative groups are more secure than   students   in
competitive groups.

Teachers'   attitudes   toward   errors   contribute to   the   overall
psychological   climate   of the classroom;   the fear of failure   is   not
great when errors are treated as normal,   nonreprehensible parts of the
learning process.

Cooperative goal structures ἐ courage positive interpersonal relationships characterized by mutual liking, positive attitudes toward each other, mutual concern, friendliness, attentiveness, feelings of obligations to other students and desire to win the respect of other students.

Cooperation in achieving mutually desired goals produces positive intergroup and interpersonal relationships.

Low achievers were not disliked by or alienated from their peers in the cooperative situations studied.

Social isolates are more often integrated into classroom friendship circles under cooperative conditions than under competitive conditions.

Cooperative goals structures produce more open, effective, and accurate communication among students than competitive structures.

Competition biases a person's perceptions and comprehension of viewpoints and positions of other individuals.

Trust is built through cooperative interactions and destroyed through competitive interactions.

There will be more mutual influence in cooperative than in competitive goals structures.

Peer encouragement for achievement and the peer climate toward academic involvement is stronger under cooperative goals structure than under competitive goals structures.

More peer tutoring is found in cooperative structure situations than in competitive conditions.

Students attempt to obstruct each other's success under competitive conditions.

42

Students will become more involved in instructional activities and tasks under cooperative than under competitive conditions.

Students prefer and like cooperatively structured over competitively structured learning situations.

Divergent thinking, especially important to problem solving, is more likely to happen under a cooperative goal structure.

Participation in a cooperative group will decrease apathetic, nonstudying, and disruptive behaviors on the part of students and talking on the part of teachers.

Cooperative problem solving results in higher achievement than does individual problem solving. Working cooperatively, students learn from each other how to solve problems and how to cooperate. This is more realistic in that most problems in society require cooperative work.

Low achieving students are especially benefited by cooperatively structured learning activities.

Social adjustment, development of the ability to communicate ffectively, autonomous moral judgement, personal identity and self awareness, reflective thought to make sense out of one's experiences, open mindedness and acceptance of differences, and empathy are believed to be fostered in cooperative group settings.

Student attitudes toward the instructional activities, tasks, subject areas, teachers, and students will be more positive under cooperative than competitive group structures.

Racial relationships are improved by interracial cooperative group experiences that are related to common goals.

EXERCISE: Cameos in Discipline

Case Study #7-1

A boy from a broken home very seldom brings his book, pencil, and paper
to class. He needs a haircut, is untidy in his dress, and has a chip
on his shoulder. He has been in trouble in other classes. As his
teacher what should you do?

Case Study #7-2

Your are a first year teacher, fresh out of college, and are teaching a
freshman course. Over a period of weeks, you notice that Betty (or
Bill) has a crush on you and insists on lingering after class everyday
and running in to you as you leave school. The situation grows more
serious to the point of embarrassment. Betty (Bill) constantly offers
to help you collect papers, hand out assignments, and run general
errands. You begin to sense resentment in the class for what appears
to be your "favored" treatment of Betty (Bill). You handle the
situation by?

Case study #7-3

You are teaching a _____ class to high school juniors, and
your training has been in _____. You find that there is one
exceptionally bright student in the class who seems to know more about
the subject than you do and uses every opportunity to show his
knowledge at your expense. The other students are aware of the fact
that this particular student may, in fact, know more than the teacher,
and this is beginning to affect your authority in the classroom, for he
often answers questions that you cannot. You realize that this one
student is causing you endless anxiety. How will you handle this
situation?

Case Study #7-4

You are giving what you consider to be a very important lecture in class one day. A boy who is sitting at the rear of the room is making sarcastic remarks which the rest of the class finds very amusing and entertaining. He simply speaks out in class, interrupting your lecture, whenever he feels like it. What will you do?

Case Study #7-5

You are conducting a junior high class. Shortly before class is to be dismissed, a once retained, nice but very socially, psychologically, and academically immature student uses profanity. He is heard by the students who know that you have heard the remark also. What are you going to do?

Case Study #7-10

Faculty members are not required to sit with their students at school assemblies. The school does not have an auditorium as yet, and assemblies are held in the gymnasium.
The city's symphony orchestra is playing at this assembly. Four or five young men are sitting at the top of the bleachers and deliberately making noise, e.g., dropping books to the floor from the top of the bleachers. What will you do?

Case Study #7-11

You are a junior high school teacher. As you are going to your class after lunch, you see one of your male students kissing his girlfriend good-bye in the hall. This action is not allowed by the faculty and student organizations at your school. What is your reaction?

Case Study #7-12

You are a teacher in the local high school. Jack Ridley, a sophomore
in the school, is generally known as a problem student. The school has
rigidly enforced a "no smoking" rule on the school grounds. You excuse
yourself at the lunch table and leave your fellow male teachers to
enter the men's rest room (used by students and faculty alike). Jack
Ridley is in the rest room with a lighted cigarette in his mouth. How
would you respond to his smoking?

Case Study #7-14

As a teacher, you have established a seminar which meets monthly at the
homes of your students. Shortly after the seminar begins one evening,
a student comes to you with the information that another male student
has alcohol on his breath. What would your reaction be?

Case Study #7-15

As a teacher in the high school, you have been asked to go along with a
group of students on a school sponsored trip to a nearby city. The
next morning two students who went on the field trip come into your
room and report that two of the other students said they took sugar
cubes of LSD before boarding the bus. What would you do?

Case Study #7-16

As teacher and friend, you have been asked for help by some students
who have drugs in their possession. They tell you that they want to
quit fooling around with the stuff, and they want to get rid of it
without selling it for fear of being caught. They have asked you as a
friend to help them in this situation. What are you going to do?

ACTIVITIES FOR SMALL GROUPS

Group Activities and Evaluation

The purpose of this section is to give the beginning teacher some ideas about the types of group activities that can be used in secondary science teaching and how these activities can be carried out. We also list some methods that can be used for group evaluation. There are many different types of activities which can be used for small group instruction in secondary school science. Examples are group laboratory work, crafts (building models, etc.), educational games, written reports, and oral presentations. The choice is limited only by the imagination of the teacher.

Activity 1: Identifying Group Leaders

This group activity is not subject matter oriented. It could be used in any class as an ice breaker at the beginning of the year and as a method for identifying group leaders. It begins with the teacher telling the following story.

There are four characters in this story, Farmer Fred, his daughter Dot, a chap named Chuck, and an old horse called Horace. The story begins with Chuck walking down the road. As Chuck walked passed Farmer Fred's farm, Chuck noticed an old horse. Chuck thought that the horse could aid him in transportation. So, Chuck knocked on Farmer Fred's door, introduced himself, and explained to Fred that he was tired of walking and offered him $60.00 for the horse. Farmer Fred liked the idea of quick cash and sold Horace the horse to Chuck. After Chuck had left on Horace, Farmer Fred stopped to think about how long he had had

Horace the horse and began to miss him.   Farmer Fred ran down the road

until he caught up with Chuck and the horse.   Fred explained that he'd

really like to buy the horse back and would give him $70.00 instead of

the original $60.00 for the horse. Chuck said, "Okay," took the money,

and continued walking down the road. Farmer Fred walked Horace back tc

the farm. As Chuck walked down the road, he realized how tired he was,

swollen feet and all.   He thought maybe Fred would take $80.00 for the

horse. Chuck finally got back to the farm, found Fred, and offered him

$80.00 for Horace.   Farmer Fred saw dollar signs and decided he liked

$80.00 in cash better than an old broken-down horse.   Chuck was happy,

climbed on Horace, and continued his journey.   A few minutes later,

Farmer Fred's daughter, Dot, came out of h; house looking for her

favorite pet and best pal, Horace the horse.   When Farmer Fred

explained that he had sold the horse for $80.00, Dot threw a fit and

cried and cried.   Fred felt bad, put Dot in the Dodge, and drove down

the road until he caught up with Chuck and Horace.   Fred pleaded with

Chuck, showed him how upset Dot was, and offered Chuck $90.00 cash for

the return of Horace the horse.   Chuck f__t sorry for Dot and gave up

the horse for $90.00.   Farmer Fred, daughter Dot, and Horace the horse

went home. Chuck, with corns, walked on. The End.

The teacher then asks the class, "Who made money, Chuck or Fred?,"

and "How much money did he make?, $10?, $20?, $30?, or did they break

even?." As a student offers an opinion, the teacher notes on the board

the student's name and the amount of money he thinks was made.   The

teacher then groups the students by asking, "Who agrees with Mary that

Chuck made $10?." Whoever agrees with Mary is placed in her group. So

forth and so on, until everybody in the class is in a group. Each group discusses among themselves why they think their answer is correct. They cannot role play or use pencil and paper to figure out the answer. After a few minutes, the groups are to mingle and try to convince each other that their group's answer is correct.

Meanwhile, two students are chosen to be observers. They are to walk around the class and observe which students are doing all the talking and convincing. After a while, the teacher asks if any of the groups have had a change of mind and who convinced them. The teacher then asks the two observers who they believe are the class leaders and why. Finding out who the group leaders are was the objective of this group activity.

To finish up and find the answer to the problem, the class will role play with play money. Four students will play the parts of Farmer Fred, Chuck, Daughter Dot, and Horace the horse. Using the play money, they will go through all the transactions that took place to actually see who made how much money. Chuck made $20.00.

Activity 2: Small Groups and the Inquiry Method

Group laboratory work is probably one of the most common uses of the small group in secondary science teaching. Small groups lend themselves to the inquiry method. By dividing the class into small groups, each with a specific question to answer, the time required with the inquiry method is reduced.

The following plan for teaching about the period of a pendulum is an example. First the teacher must clearly define the problem to the class as a large group, "What factors effect the period of a pendulum?"

Then the teacher asks the class as a group to suggest factors which they believe may effect the period of a pendulum. The teacher makes a list of these factors on the board. The class is then divided into small groups. Each group is responsible for investigating the effect of one of the listed factors on the pendulum and is provided with the equipment necessary to test that factor. During the "data collection" part of the lesson, the teacher should move among the groups to question them about their experimental technique and to help keep everyone on the task. The teacher may wish to appoint a leader and scribe (data recorder) to each group. A marshal to keep everyone on task may also be appointed. After each group has completed their experiments, they present their findings to the rest of the class. The teacher may wish to record the findings of each group on the board as they are presented. When all the group findings have been presented, the class can begin to analyze and draw conclusions from their data. By using small groups, each working on a different part of a problem, and by careful structuring of the lesson, the inquiry method can be speeded up, making it a more useful teaching tool.

GROUPING IN SCIENCE FOR ENRICHMENT, RETEACHING, AND PROBLEM SOLVING

1. Groups are formed on a short term basis, and the composition of the group changes rather frequently.

2. A basic premise in grouping is that all groups do not complete the same assignments. Differentiated assignments are the rule.

3. Each group is given careful instruction as to what is expected of them. Assignments are specific.

4. Behavior expected of students while in groups is described. Consequences of what will happen to students who do not behave appropriately are carefully spelled out and implemented.

5. Students are given careful instructions in how to move to and from groups, how to secure instructional material needed, and how to turn in work assignments when completed.

6. A student group leader is selected to assist the teacher in implementing the study activities within groups (particularly in those with whom the teacher is not directly working).

7. Multilevel instructional materials are secured. For example, in junior high grades, some textbook publishers have materials that are written on a higher order of concepts level. Others have textbooks considered basic in reading level and in the treatment of concepts. A well ordered classroom must have materials available which are written at different levels. In senior high grades, textbooks written for the college level may also be available.

8. Minimal expectancy level skills are identified for mastery of students in each class; i.e., students must be able to perform

these objectives if they expect to pass the course with a "C" grade level. These materials serve as the basis for grouping for reteaching. After initial instruction, students are given a criterion-related test to determine whether they have mastered this basic 75% of the course materials. Those who do not perform at the expected level are grouped for reteaching. New materials and methods of teaching are used with these students. Some alternatives are using Learning Activity Packets, computer-assisted instruction, or teacher-guided drill sessions.

9. Students who mastered the minimal level skills are given advanced assignments for enrichment. This enrichment is horizontal in the sense that students get to do more and advanced work in the topic of study. For example, if the teacher is working on the balancing of equations, the advanced students are given more complex equations to solve. They do not work the same equations which are being taught to the basic group. They may solve five advanced equations instead of five basic ones. The group usually works in a system of cooperative learning.

10. The basic or remedial group may never do the work assigned to the enrichment group.

11. Types of enrichment activities: Students plan experiments for themselves through the use of laboratory manuals and other reference books. These experiments are different from those planned for the class as a whole. Students work on readings in science other than textbook (e.g., <u>Scientific American</u>, science newsletters).
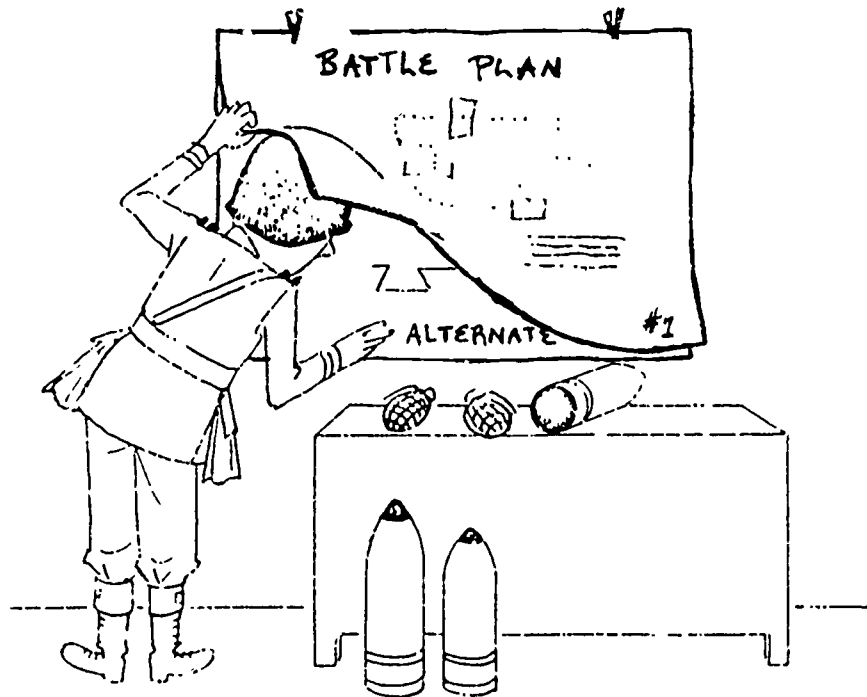
APPENDICES

Appendix 1
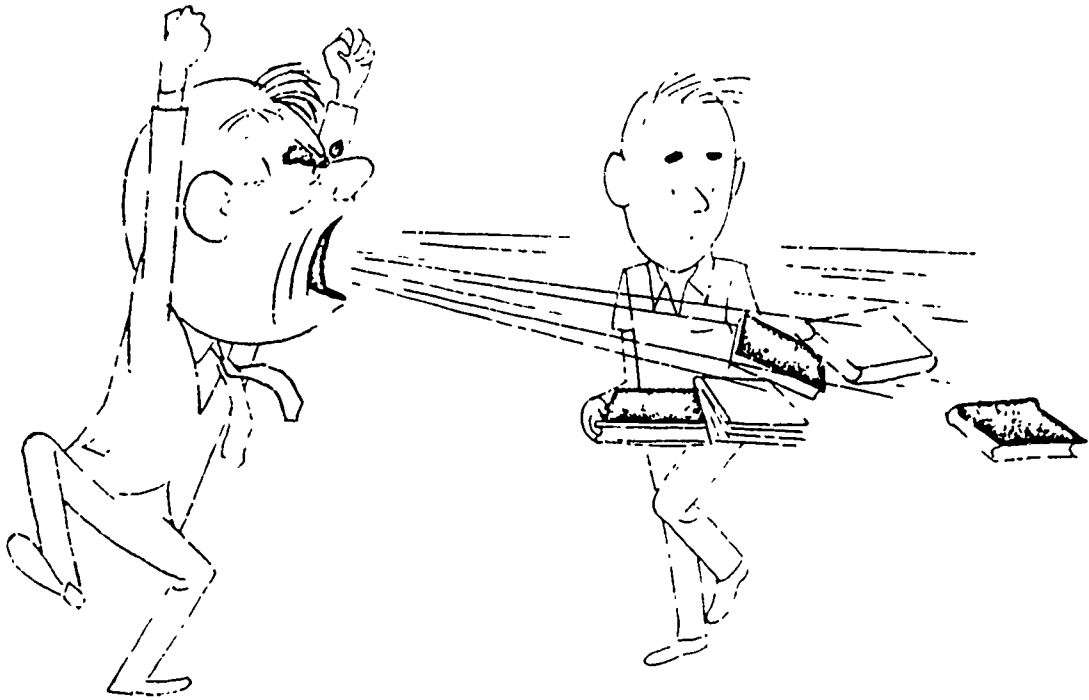
Teacher Behaviors for Effective Classroom Control

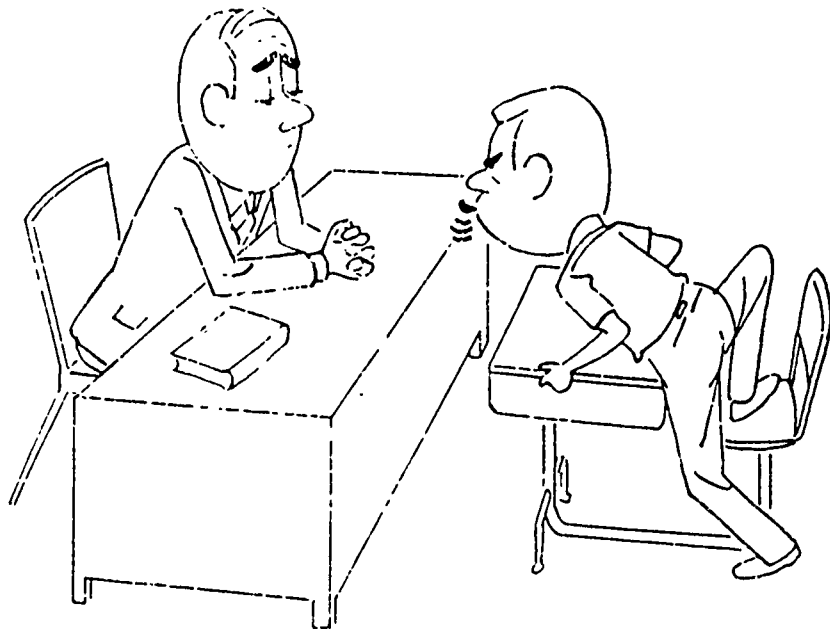Cartoon Transparencies to Stimulate Discussion
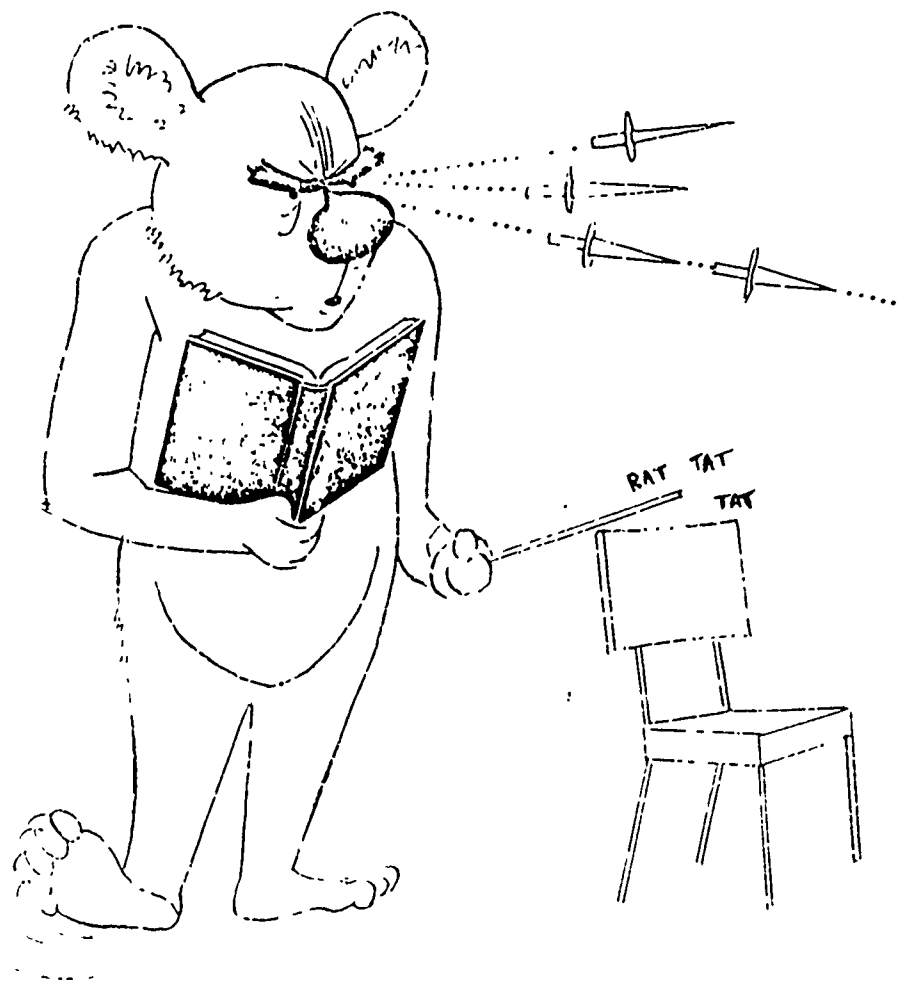
Be Prompt

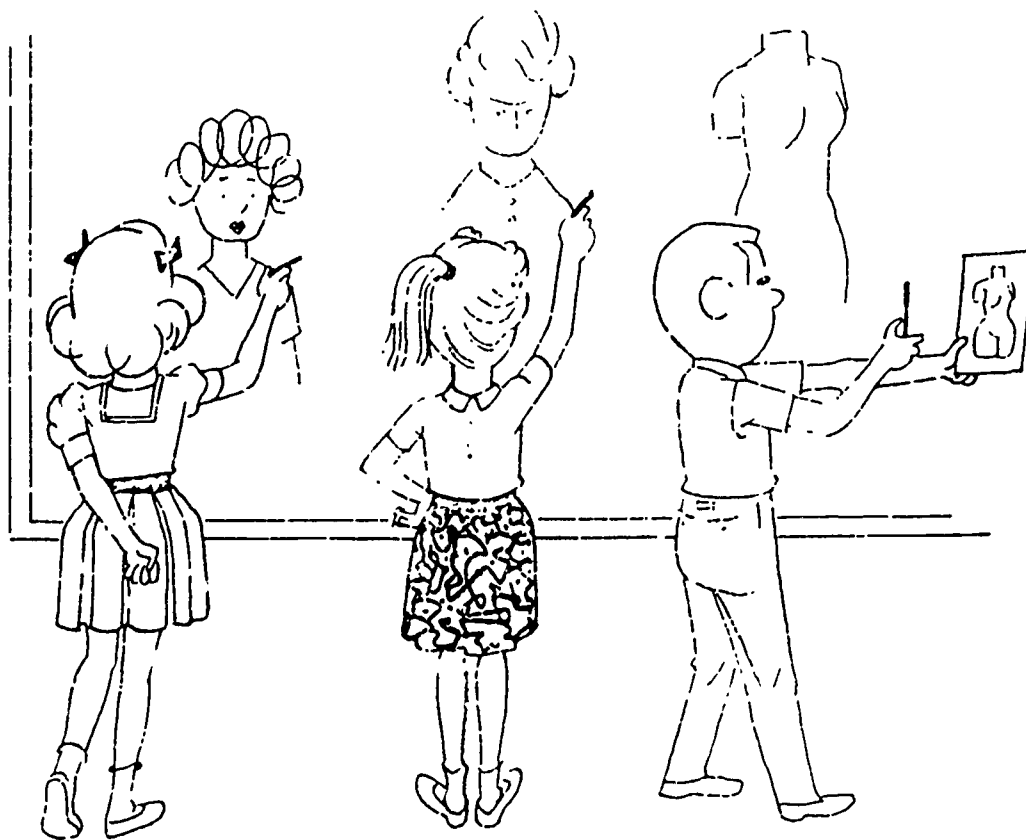## ...And Be Prepared

Be Poised!

Be Firm.

So ...

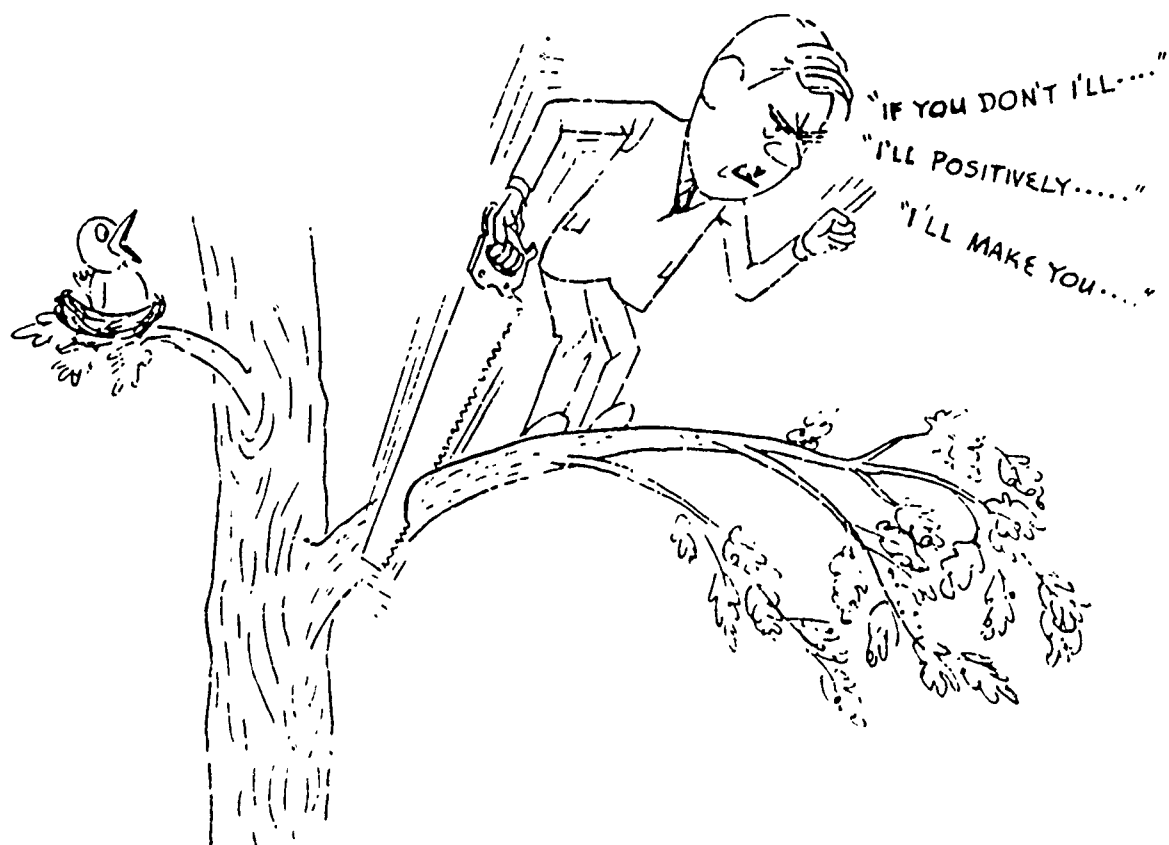# Look For Potential Trouble Spots.

RAT TAT
TAT

**Provide Opportunities For
Children To Excel.**

Be A Ham!

Don't Threaten Anything
You Can't Carry Out...

"IF YOU DON'T I'LL...."
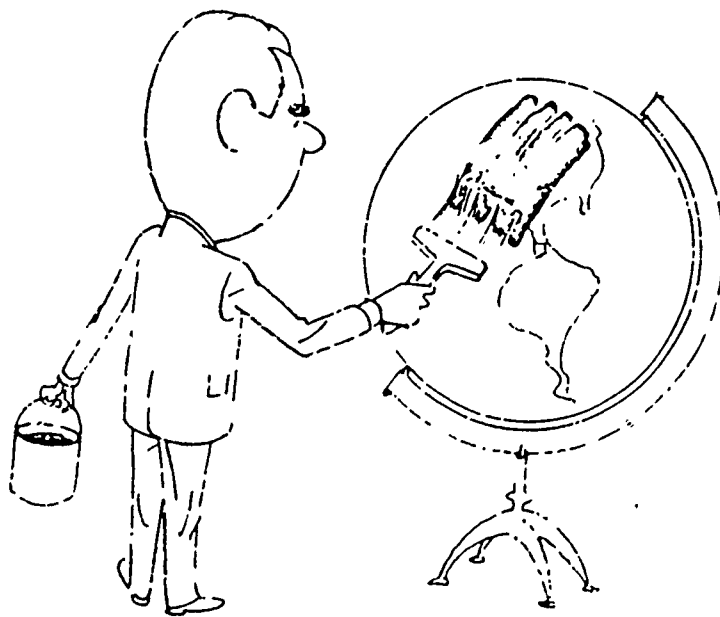"I'LL POSITIVELY....."
"I'LL MAKE YOU...."
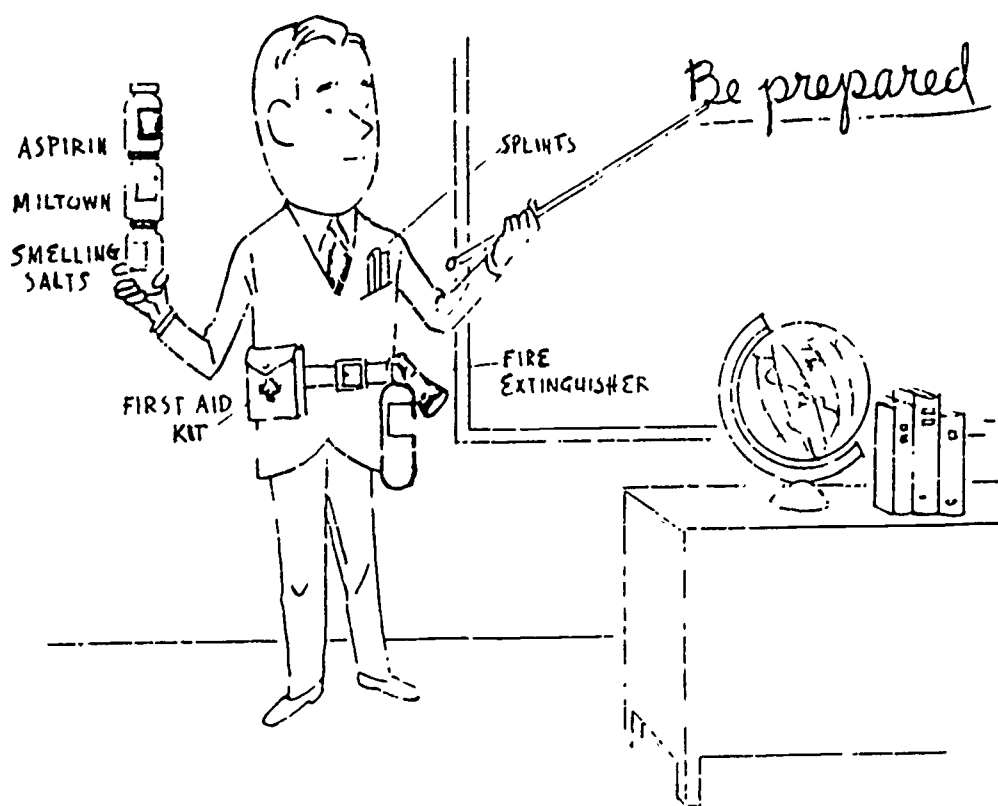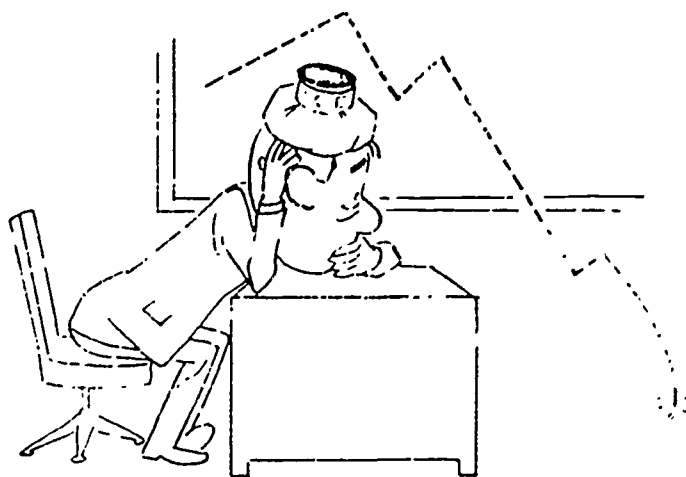
Be Ready For Emergencies!

Understand

Fads

Be Human!

Who's Perfect?

Appendix 2

TEST ON CLASSROOM DISCIPLINE

<u>Directions</u>: Please read each of the following test items carefully.
Respond to each item in an essay form. You should spend the entire 50-
minute period in reacting to the four questions.

1. Joe repeatedly talks to his friend George in Algebra and disrupts
    the class with this noise. In approximately five steps, apply
    assertive discipline techniques to encourage his change in
    behavior. Be sure to relate each step of the technique to the
    specific problem with Joe. Write your plan, outlining the
    procedure you would use.

2. What types of early planning can the teacher do to avoid classroom
    discipline problems later?

3. A troubled eighth grader, Angelo, told me, "I get into problems in
    old Mr. Jones' class all the time. He does not like me. I never
    have trouble in any of my other classes. My other teachers are
    OK." If you were interested in identifying the classroom behaviors
    of Mr. Jones which trigger hostility in Angelo, what are some
    likely characteristics in the teacher for which you would look?
    Assume that Angelo has a valid gripe; i.e., Mr. Jones stimulates
    hostility.

4. Explain the meaning of the following concepts.
    a. The focusing principle as described by T. R. McDaniel in his
        classroom primer on discipline
    b. The principle of behavioral modeling by teachers
    c. The principle of positive reinforcement

BIBLIOGRAPHY

Canfield, A. A. (1976). Learning styles inventory. Northville, MI: A. A. Canfield.

Cotton, K., & Savard, W. G. (1981). Instructional grouping: Group size, research on school effectiveness project. Northwest Regional Laboratory.

Dunn, R., & Carbo, M. L. (1979). The learning gamble: How to improve the odds for every youngster. Learning, 8, 34-35.

Enoch, J. R., Handley, H. M., & Wollenberg, J. P. (1986). Relating learning style, reading vocabulary, reading comprehension, and aptitude for learning to achievement in the self-paced and computer-assisted instructional modes. Journal of Experime. al Education, 54, 135-139.

Evertson, C., & Emmer, E. (1982). Effective management at the beginning of the school year in junior high classes. Journal of Educational Psychology, 74, 485-498.

Handley, H. M. (1982). Effectiveness of the Lee County reading aide program in promoting achievement in young children. Mississippi State, MS: Bureau of Educational Research & Evaluation.

Johnson, D. W., & Johnson, R. T. (1984). Cooperative small-group learning. Curriculum Report, 14, 1-6.

Peterson, P. L., Janicki, T. C., & Swing, S. P. (1981). Ability x treatment interaction effects on children's learning in large-group and small-group approaches. American Educational Research Journal, 18, 453-473.

Slavin, R. E. (1981). Synthesis of research on cooperative learning. Educational Leadership, 18, 655-660.

Swin, S. R., & Peterson, P. L. (1982). The relationship of student ability and small-group interaction to student achievement. American Educational Research Association Journal, 19, 259-274.