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ABSTRACT

The purpose of this paper is to describe a system of individually guided motivation which is directly tied to a total system of individually guided education. In the system of motivation, the child's entering characteristics are assessed, motivational objectives in the form of desired behaviors are set for each child, a program designed to generate and maintain a desired level of motivation for each child is carried out, and finally the child's motivational progress is assessed. The components of the system of individually guided motivation described in this paper include a statement of behaviors indicative of motivation, a list of motivational principles based on theory and research and instructional guides based on these principles, descriptions of procedures for assessing motivation, and finally descriptions of student and teacher activities which can be carried out to implement the principles of motivation. The motivational activities are usually directly tied to the instructional program in various curriculum areas and include large group class size group, small group, and one to one activities. (Author)

A SYSTEM OF INDIVIDUALLY GUIDED MOTIVATION

WISCONSIN RESEARCH AND DEVELOPMENT

CENTER FOR COGNITIVE LEARNING

Practical Paper No. 9

A SYSTEM OF INDIVIDUALLY GUIDED MOTIVATION

By Herbert J. Klausmeier, Elizabeth A. Schwenn, and Peter A. Lamal

Report from the Situational Variables and Efficiency
of Concept Learning Project
Herbert J. Klausmeier and Robert E. Davidson, Principal Investigators

Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
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The Wisconsin Research and Development Center for Cognitive Learning focuses on contributing to a better understanding of cognitive learning by children and youth and to the improvement of related educational practices. The strategy for research and development is comprehensive. It includes basic research to generate new knowledge about the conditions and processes of learning and about the processes of instruction, and the subsequent development of research-based instructional materials, many of which are designed for use by teachers and others for use by students. These materials are tested and refined in school settings. Throughout these operations behavioral scientists, curriculum experts, academic scholars, and school people interact, insuring that the results of Center activities are based soundly on knowledge of subject matter and cognitive learning and that they are applied to the improvement of educational practice.

This Practical Paper is from the Situational Variables and Efficiency of Concept Learning Project in Program 1. General objectives of the Program are to generate new knowledge about concept learning and cognitive skills, to synthesize existing knowledge, and to develop educational materials suggested by the prior activities. Contributing to these Program objectives, the Concept Learning Project has the following five objectives: to identify the conditions that facilitate concept learning in the school setting and to describe their management, to develop and validate a schema for evaluating the student's level of concept understanding, to develop and validate a model of cognitive processes in concept learning, to generate knowledge concerning the semantic components of concept learning, and to identify conditions associated with motivation for school learning and to describe their management.

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ABSTRACT

The purpose of this paper is to describe in detail a system of individually guided motivation which is directly tied to a total system of individually guided education. In the system of motivation, the child's entering characteristics are assessed, motivational objectives in the form of desired behaviors are set for each child, a program designed to generate and maintain a desired level of motivation for each child is carried out, and finally the child's motivational progress is assessed.

The components of the system of individually guided motivation described in this paper include a statement of behaviors indicative of motivation, a list of motivational principles based on theory and research and instructional guides based on these principles, descriptions of procedures for assessing motivation, and finally descriptions of student and teacher activities which can be carried out to implement the principles of motivation. The motivational activities are usually directly tied to the instructional program in various curriculum areas and include large-group, class-size group, small-group, and one-to-one activities.

I
INTRODUCTION

The school takes primary responsibility for children's learning of knowledge and skills in curriculum areas such as the physical world, the social world, quantitative relations, language arts, foreign languages, the fine arts, and physical development. The school also has some responsibility for children's learning of prosocial values and behaviors. Motivation is central to the efficient learning of both subject matter and prosocial values. The school should utilize the positive motives of children and manage the school environment in order to generate and maintain a desired level of motivation in each child.

Young children entering school frequently manifest behaviors indicative of primary needs, including physiological, safety, love, and belonging. Given sufficient control over the child and his environment, a skillful adult can shape, or mold, the child's behaviors through the proper reinforcement of desired responses and the deprivation of the primary needs. Parents and teachers appropriately should capitalize upon the child's motives and, as best they can, manipulate the environment by presenting models, reasoning, and other means in such manner that the child desires to learn subject matter, for example, to read and to write, and also to learn prosocial behaviors, for example, to conserve property and to begin school work promptly. Although the teacher can manipulate the environment to generate and maintain a desired motivational state, the goal of a motivational system is to get the child, as quickly as possible, to want to learn subject matter and socially approved behavior without adult control. The child is to learn a value system whereby he commits himself to learning tasks, persists and succeeds at the tasks, and uses socially approved means to achieve his goals.

The preceding statements imply that motivation is a central and complex factor in school settings. The interacting elements within the school are the children, each with characteristics and motives, and a teaching staff, also with motives. In addition, the staff has varying levels of opportunity and ability to manipulate the environment, including the difficulty of learning tasks, the grouping of children, the use of instructional materials, the use of time, and the use of positive and negative reinforcers. Thus, motivation is more than focusing the children's attention at the beginning of a lesson or unit. Motivation for learning is not produced through sarcasm and threat of punishment. Developing a system of individually guided motivation is not a peripheral activity to be considered only when students misbehave or do not study well. It is not developed apart from the learning of subject matter and prosocial values. Rather, motivational procedures must be considered as an integral part of a total instructional program developed for each student. A system of individually guided motivation, directly tied to a total system of individually guided education, is formulated and clarified in the remainder of this paper.

The components of a system of individually guided education, as shown in Figure 1, include a statement of behavioral objectives; an instructional program, including equipment, materials, student activities, and teacher activities to achieve the objectives; procedures for initial placement of the students and subsequent monitoring of their progress; an organization for instruction; and measurement tools and evaluation procedures. The identifiable behaviors and characteristics of the students are carefully assessed at the time of school enrolment so that relevant objectives for each student may be identified and the students may be placed initially in one-to-one relations with the instructional staff, small groups, class-size groups, groups larger than class-size, and independent activities. The teaching staff thereafter guides their learning activities and continues to assess their characteristics and progress. There is frequent

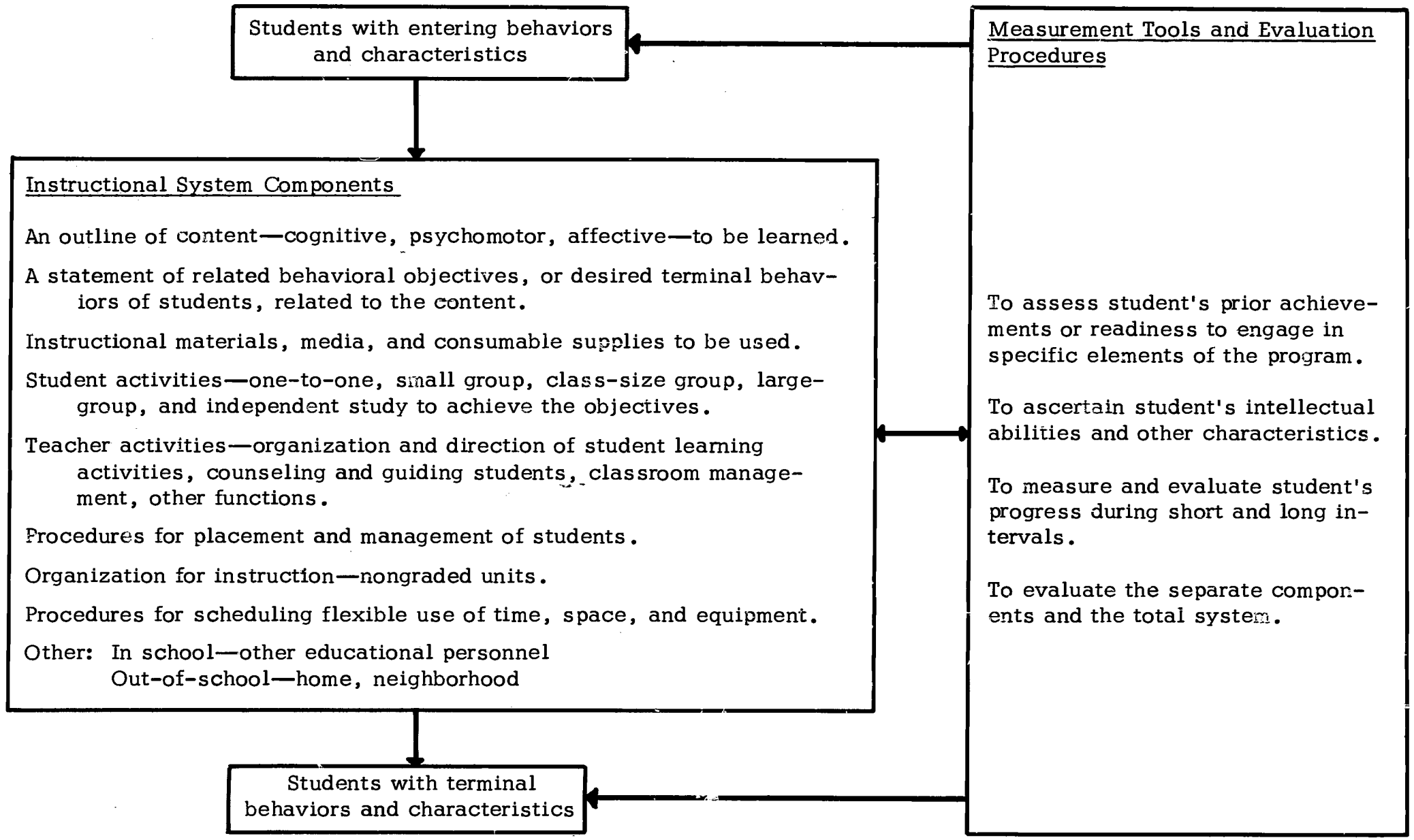

Figure 1. Major Components of an Instructional System

regrouping for instruction during a semester. The staff develops and carries out a system of individually guided motivation as an integral part of the instructional program.

A system of individually guided motivation is outlined in Figure 2. Here, as in the more general system, the child's entering characteristics are assessed, motivational objectives in the form of desired behaviors are set for each child, and a program designed to generate and maintain a desired level of motivation for each is outlined and carried out. The child's motivational progress is carefully assessed. On the basis of evaluative feedback, changes are made in the motivational program of each child. Motivational procedures used by the teacher are usually directly related to the instructional program in the various curriculum areas. For example, most of the motivational program is carried out in the same large-group, class-size group, small-group, and one-to-one activities that are used in the instructional program. Thus, changes in the motivational program for a child usually require changes in his instructional program. As will be noted later, however, some time may be given solely to deal with motivation.

The next section of this paper gives motivational objectives that provide a basis for

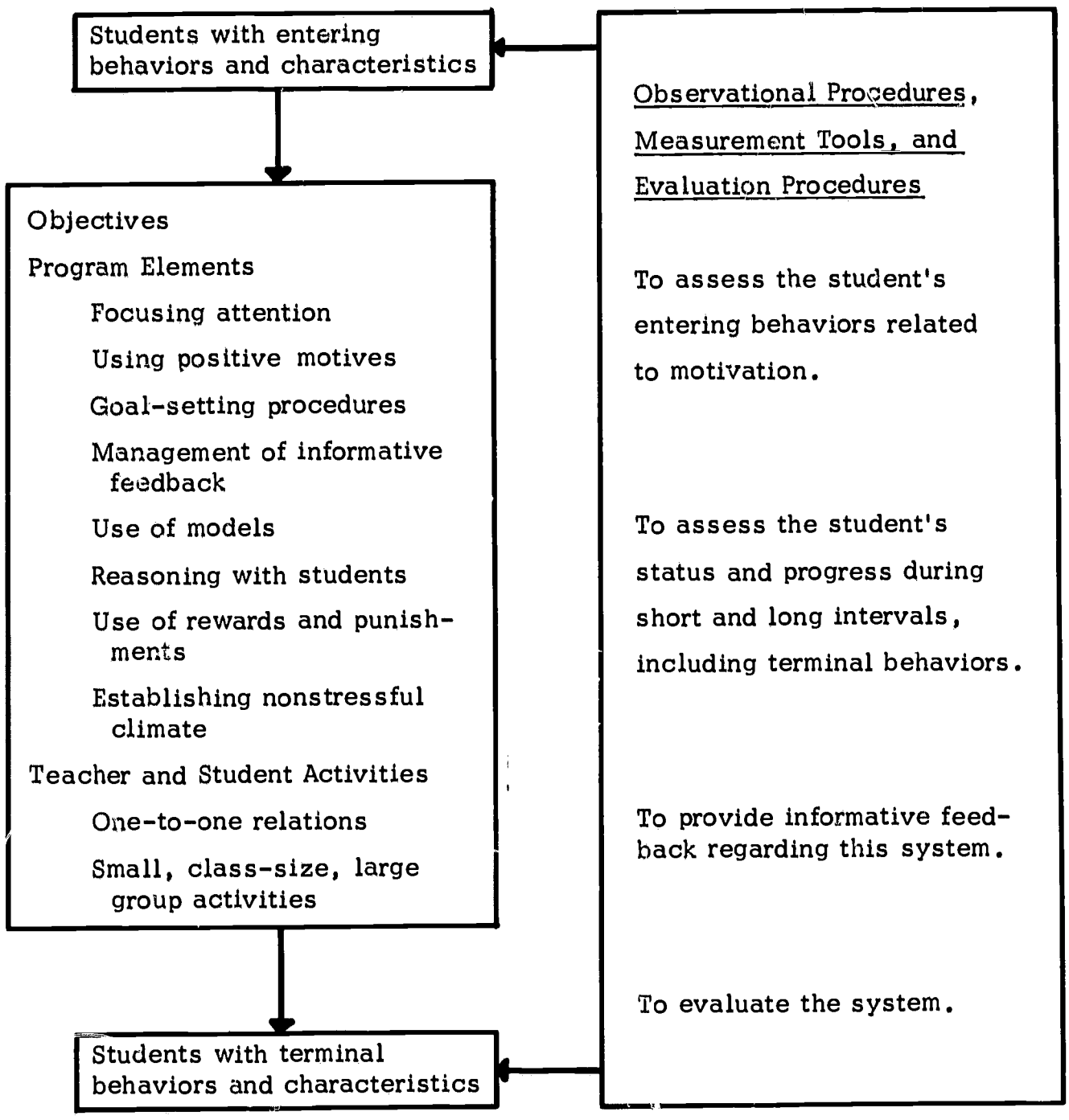

Figure 2. Components of a System of Individually Guided Motivation

assessing the entering motivational state of each student, identifying objectives for each student, and planning a relevant motivational program to attain the objectives. In a later section, generalizations about motivation are presented that provide a foundation for motivational practices in school. Finally, some activities that may be carried out with groups of varying size and in one-to-one relations are described in considerable detail.

OBJECTIVES OF A MOTIVATIONAL SYSTEM

What observable behaviors, or actions, of students are indicative of wanting to learn subject-matter knowledge and skills? Similarly, what behaviors are indicative of wanting to learn prosocial values? Also, what behaviors represent a good balance between conformity to the school's code of conduct and individual freedom of expression? These behaviors, properly stated, are the objectives of a school's system of individually guided motivation and can, in turn, be used in determining a program that may be appropriate for each child.

Behaviors indicative of motivational states cannot be postulated as precisely as those related to achievement in various subject fields. Possibly, too, there may be substantial disagreement among teachers about a desirable balance between student independence and student conformity to the school's code of conduct and other regulations. Therefore, the objectives which follow require study, especially from the standpoint of their applicability to the teachers' value system and to the characteristics of the students. It is expected that some modifications in the statement of objectives will be made by the staff of a school building. It is recognized, also, that some students may not manifest the behaviors even after persistent teacher effort while others of the same age do show such behaviors at the outset of the school term. This clearly implies that specific objectives and related motivational procedures must be formulated for each student.

The objectives which follow in Table 1 are stated at two levels of generality. Four general objectives are stated that deal with motivation for learning subject-matter knowledge and skills, developing independence from adults in connection with motivation, following school policies and practices in connection with conduct, and conceptualizing a value system. More specific behaviors related to each general objective are given. At the next level of specificity, the teacher of a 7-year-old, after assessing the child's characteristics and behaviors related to motivation, would state more precise objectives for him. For example, "Begins tasks promptly" requires further specification of the tasks that are appropriate for children of varying age and school levels.

Table 1

Behaviors Indicative of Motivation

A. The student starts promptly and completes self-, teacher-, or group-assigned tasks that together comprise the minimum requirements related to various curriculum areas.

1. Attends to the teacher and other situational elements when attention is required.
2. Begins tasks promptly.
3. Seeks feedback concerning performance on tasks.
4. Returns to tasks voluntarily after interruption or initial lack of progress.
5. Persists at tasks until completed.

B. The student assumes responsibility for learning more than than the minimum requirements without teacher guidance during school hours and outside school hours. In addition to Behaviors 1-5, the student

6. Continues working when the teacher leaves the room.
7. Does additional work during school hours.
8. Works on school-related activities outside school hours.
9. Identifies activities that are relevant for class projects.
10. Seeks suggestions for going beyond minimum amount or quality of work.

C. The student behaves in accordance with the school's policies and practices in connection with use of property, relations with other students, and relations with adults.

11. Moves quietly within and about the school building during quiet periods and activities.
12. Interacts harmoniously with other students.
13. Interacts harmoniously with the teacher and other adults.
14. Conserves own and other's property.
15. Tells other students to behave in accordance with school policies.

D. The student verbalizes a value system consistent with the preceding behaviors.

16. When asked, gives examples of his own actions illustrative of Behaviors 1-15.
17. When asked, gives reasons for manifesting Behaviors 1-15.

II

GENERALIZATIONS AND INSTRUCTIONAL GUIDES REGARDING MOTIVATION

In Figure 2 the components of a motivational system were presented. In the previous chapter, sets of objectives were outlined. In this chapter a set of generalizations about motivation and learning based upon research and theory and a corollary set of instructional guides are stated and discussed so that applications can be made to many settings.[1] In a subsequent section, a school-wide motivational system is outlined, dealing with student conduct and emphasizing the use of reasoning. Later, specific and detailed procedures for implementing several instructional guides simultaneously in one-to-one relations are given. Instruments and evaluation procedures are dealt with in the last chapter.

In the left column of Table 2 are given generalizations concerning motivation. These are conclusions drawn mainly from laboratory studies and related theorizing about motivation. In the right column instructional guides are listed that are parallel to the generalizations. The first three generalizations deal primarily with motivational concerns related to the learning of school subject matter: focusing of attention, goal setting and goal attainment, and providing informative feedback after activities are underway. The next two generalizations are more directly applicable to student conduct: dealing with the initial acquisition and subsequent conceptualization of self-control, self-reliance, persistence, and other prosocial behaviors. The last two generalizations are equally relevant to both learning and conduct.

The preceding set of generalizations are stated in motivational terms. Subject-matter specialists might restate (A), (B), and (C) to apply specifically to mathematics, science, and other subjects as instructional procedures. Similarly, teachers interested in citizenship might restate (D) and (E) as instructional principles. Thus, there is a close relationship between instruction in the various subject-matter areas and children's motivational states. If the instructional program of the school in the various subject-matter areas cannot be managed to make instructional guides (A) - (E) possible, there is little point in discussing motivation for learning. The brief discussion which follows assumes that teacher actions implied by the instructional guides are possible.

FOCUS STUDENT ATTENTION

Students come to school and teaching-learning situations with interests and needs that may divert their attention from the objectives. In introducing a lesson or unit, the teacher manipulates the school environment to direct pupil attention toward the objectives. To secure and focus attention, the teacher appeals to more than one sensory modality, usually including seeing and hearing and sometimes also smell, touch, and temperature. Properties of the environment that can be manipulated to focus attention are change, movement, size, intensity, repetition, and vividness. Of two environments that may be arranged to focus the attention of many students, the advantage goes to the one of greatest change from prior experiences in it, greatest movement of focal objects, greatest size of focal objects, strongest intensity of focal objects, most frequent repetition of objects or ideas, and greatest vividness of color, contour, or contrast. Recall some of the best

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[1] The heuristic and theory discussed here were treated more systematically earlier in Klausmeier, Herbert J., and Goodwin, William. Learning and Human Abilities: Educational Psychology (2nd. ed.), New York: Harper & Row, 1966.

Table 2

Generalization and Corollary Instructional Guides

Generalization	Instructional Guide
A. Properties of the environment may be manipulated and the students' perceptions may be modified in. order to focus student attention toward learning tasks.	A. Focus student attention on desired objectives.
B. The individual's curiosity and his desires to manipulate and achieve control over elements of the environment may be utilized in directing activity used in goal setting.	B. Utilize the individual's curiosity and needs for manipulation and competence.
C. Setting and attaining goals require learning tasks at an appropriate difficulty level; feelings of success on current learning tasks heighten motivation for subsequent tasks; feelings of failure lower motivation for subsequent tasks.	C. Help each student set and attain goals related to the school's educational program.
D. Providing information concerning correct or appropriate behaviors and correcting errors are associated with better performance on and more favorable attitudes toward the learning tasks.	D. Provide for informative feedback.
E. Many prosocial behaviors indicative of self-control, self-reliance, and persistence are initially acquired through observing and imitating a model and are strengthened through reinforcement.	E. Bring exemplary real-life and symbolic models into the school setting.
F. Reasoning with students about prosocial values and behaviors provides a conceptual basis for the development of the behaviors.	F. Provide for verbalization of prosocial values.
G. The expectancy of receiving rewards for specified behavior or achievement directs and sustains attention and effort toward manifesting the behavior or achievement. Nonreinforcement after a response tends to extinguish the response. The expectancy of receiving punishment for manifesting undesired behavior may lead to suppression of the behavior, to avoidance or dislike of the situation, or to avoidance and dislike of the punisher.	G. Develop and use a system of rewards as necessary to secure sustained effort and desired conduct. Use punishment as necessary to eliminate and suppress misconduct.
H. Sustained high stress is associated with low performance, erratic conduct, and personality disorders.	H. Avoid the use of procedures that create temporary high stress or chronic anxiety.

sound motion pictures and television commercials that you have seen. Both incorporate these features as a means of directing and holding attention.

Teachers also can manipulate some of the properties as may be noted in the two illustrations.

Intermediate school children were introduced to the study of "Cold Lands" this way. The pupils arrived at school the first day after the Christmas holidays on a cold morning. After 2 weeks of vacation, the children, anxious to get in from the cold, hurried to Room 120. The thermometer registered 55 degrees in the corner of the room with a north exposure. With stormcoats and snowsuits on, the children handled the totem

pole and the walrus teeth, and examined photographs of Lapps with reindeer herds, laughing Eskimos on Baffin Island, Aleuts ice fishing, and numerous pictures displayed on bulletin boards. After spending a few minutes with these various things, some of the children started examining library books that had been placed on tables. One or two others began to find the "Cold Lands" on globes and maps. The novelty of the room, including the temperature, was instrumental in arousing curiosity and directing pupil attention toward the study of the "Cold Lands."

A beginning teacher focused pupil attention on the study of Japan as follows:

The first day of the unit the students walked into an environment which was definitely Japanese. In the front of the room was a wall map of Japan and a travel poster. Bulletin boards were filled with pictures of Japan. But, the best materials were on the table in the front of the room, some of the many products made in Japan. Few students were in their seats when the bell rang. Students were examining the objects and raising questions. Every student was trying to identify and name the products made in Japan.

In addition to manipulating the physical aspects of the environment, the teacher may also modify students' interests and needs through carefully chosen words. Questions that cannot be answered with factual statements are often raised to direct thinking. Sometimes new information is presented that enables the student to discover a relationship between his current interests or felt needs and the new field of study. Questions followed with discussion of what and why to study are also helpful. These and many other procedures are used in small-group, class-size group, and large-group settings.

USE POSITIVE MOTIVES:
Curiosity, Manipulation, and Competence

Curiosity is manifested in the looking, listening, smelling, and other attending behaviors which the individual directs toward new or infrequently encountered objects and events. In some instances also, children physically approach non-feared objects and situations with which they are unfamiliar. When encountering a situation which differs markedly from his prior experiences, the individual does not have immediately available responses to deal with it. He attends closely to the situation, possible to identify relevant responses for dealing with it or possibly because attending is satisfying.

Manipulation may be defined as the handling of objects and ideas. The handling of ideas cannot be observed directly, but it can be inferred from observations. Individuals manipulate things physically, apparently not always to receive an incentive, such as praise, food, or money, but also for the satisfaction derived from the handling of objects. Handling the objects per se or handling the objectives to arrive at a configuration appears to be satisfying to the individual. The desire to manipulate objects physically may, in turn, be used for brief time intervals to focus attention on a learning task that involves manipulation of symbols and ideas.

The competence motive and the need to achieve are also classified as positive motives. They are alike in that both involve gaining control over elements of the environment. The individual interacts with the environment in such way as to gain control over it; for example, he masters a fork for eating, a ball for throwing, and printed words for reading. Competence goes farther than achievement in that the interactive process also involves the individual's learning the effects the environment have on him: fire, snow, a dog, a playmate. The competence motive is manifested in interacting with the environment, often physically, to ascertain the effects the environment has on him and his effects on the environment. This kind of interaction appears to be self-satisfying or intrinsic.

Curiosity and the desires to manipulate and achieve competence are present in most children early in school life and should be used in the school's system of individually guided motivation. The instructional staff arranges the environment for this purpose, as suggested in prior examples. Novel materials and ideas are used in one-to-one instructional situations, and in small groups, class-size groups, and large groups. With individuals and groups, ideas that the students may be unable to handle in words are transformed into physically manipuable patterns, including mechanical models. For example, representations of gravity, force, sentence, and equation are presented in nonverbal form to be manipulated. Particularly early in the study of any subject matter when children are acquiring fundamental concepts, many direct experiences with instances of the concepts are arranged so that the competence motive may operate. Although the discussion and examples thus far have been directed toward the use of these intrinsic motives in directing attention initially, there is a strong possibility

that a school staff could arrange its environment so that students become habitually curious and desire to become increasingly competent in connection with learning tasks in and out of school. Also, these positive motives are operative in setting and attaining goals.

HELP STUDENTS TO SET AND ATTAIN GOALS

Individual goal setting is defined as specifying some state of affairs to be attained by or for oneself at a specified future time; for example, spelling a group of 20 words correctly tomorrow, completing a report on India next week, and gaining first chair on the trombone 1 year hence. As noted in these examples, goals vary with respect to the amount of time needed to achieve them and the specificity with which the final performance is defined. Also, a varying amount of initiative is taken by individuals in setting their own goals. Typically, the young child is expected to set specific goals of short duration with assistance from the teacher but adolescents are expected to set both general and specific goals of longer duration with greater independence from the teacher or other adults. While the teacher may suggest possible performances to be achieved at a certain time, the individual sets his own goal. The teacher's suggestions are merely words, not the child's goal.

When a person sets a goal, he tries to attain it. Making progress and attaining goals are accompanied with feelings of success. Conversely, not making progress and not attaining goals are accompanied with feelings of failure. Nothing encourages continued effort and further realistic goal setting more effectively than a backlog of goals successfully attained. Why then does the student so infrequently set individual goals in many school settings? There are four main reasons. First, even though individual students vary widely in readiness to learn, they are all given the same tasks to accomplish during a specified time. Second, the teachers are not able to accurately assess each student's achievement level and other characteristics. Third, teachers do not take the time or have the ability to help each student set and attain realistic goals. Fourth, instructional materials and activities are often not available to permit the kind of instruction which individual goal setting and goal attainment require.

A later section of this paper outlines detailed procedures for goal setting in mathematics through conferences between an adult, usually a teacher, and the child. It is possible that a teacher might work with a small group of students, rather than with each individual, when assisting each student to set his goal. It is possible that after children have had goal-setting experience in one-to-one conferences, a teacher might proceed successfully with small groups. As noted earlier, a variety of instructional material, learning tasks of varying levels of difficulty, adequate assistance to students with their learning tasks, and relevant means for measuring progress are essential to individual goal setting and goal attainment.

PROVIDE INFORMATIVE FEEDBACK

Securing informative feedback is defined as receiving information after responding, or during a series of responses, concerning the correctness or adequacy of the response. The information relates directly to the performance. Having available the correct solution and methods to compare with one's own solution and methods illustrates informative feedback. In other activities feedback is not so readily forthcoming. For example, it is difficult to learn whether one is getting the meaning intended by an author, whether the report one gives is properly organized, and whether the information one gets from television news reports is complete. Nevertheless, informative feedback is as helpful to the individual in these situations as in the first.

Feedback helps the student by making him aware of the correctness or adequacy of certain responses, making him aware of the incorrectness or inadequacy of certain responses, aiding him in correcting or improving responses, and cumulatively aiding him in achieving a higher quality response or set of responses. Thus, feedback is essential to attaining goals over a period of time. Just as one cannot keep a car in his lane of the highway without continuous feedback and correction of movements, so also one cannot achieve improved performance in handwriting, spelling, or mathematics without feedback which facilitates the identification of correct responses and the correction of errors or inappropriate responses. Knowing that one is making progress and getting immediate assistance in overcoming deficiencies and errors are powerful motivating influences for persevering at learning tasks until they are mastered.

Feedback provided to the individual is based on his performance. For example, after each student's paper is corrected, the feedback takes into account his correct responses and his errors. Usually the teacher, but sometimes an instructional aide or another student, provides the

feedback. Autoinstructional, or programed, material is designed specifically to provide immediate and frequent feedback. Computers are also being used to provide more rapid and accurate feedback. Up until the present, however, no machine or programed instructional material has been found that will completely replace the teacher's role in providing informative feedback. This is not to say that the teacher's feedback must always be in a one-to-one conference relationship. Comments supplied on assignments are given to the student in the same groups in which the assignments were elicited. Feedback also may be given regarding oral contributions, physical actions, and other performances of the student in one-to-one settings, small groups, and large groups. Small-group discussions, question-and-answer sessions, and other group interchange of information are valuable to the extent that informative feedback is provided to the various participants.

PROVIDE EXEMPLARY MODELS

A child for the first time observes his father hug his mother when the father comes home in the evening. His mother and father appear happy. The next time the child comes into the house he, too, hugs his mother. An adolescent for the first time observes a singer engage in certain bodily movements when singing. The adolescent when singing tries to repeat the same motions. These are examples of acquiring initial behavior through observing and imitating.

The models whom children observe and imitate may be classified as real-life, symbolic, or representational. At home real-life models for younger children are parents and older relatives, including brothers and sisters. Teachers and older children are real-life models for children in school. There may also be other real-life models. Symbolic models are presented to children through oral or written material and pictures or through a combination of verbal and pictorial devices. The models presented in books and other printed material are important. Representational models presented by audiovisual means, particularly television, are also highly influential. In the schools and in many homes much attention is given to exemplary models, models who demonstrate behaviors that are considered desirable by the adults responsible for the education of the children. Prosocial behaviors of the kind outlined in the objectives in Table 1 are learned initially through imitation and are strengthened through the use of positive reinforcement.

Imitation works in three ways to increase the number, range, and intensity of the observer's matching response. First, the observer acquires new behavior that he had not previously manifested. For example, a child observes a model speak and subsequently manifests some of the speaking behaviors of the model. Second, observing a model may strengthen or weaken inhibitory responses of the observer. Here the observer already has the behavior in his repertoire, but it has been inhibited. Inhibited behavior seen in a model who is rewarded is disinhibited or strengthened. For example, a child already can tear a page from a book. Seeing a model punished for tearing a page from a book inhibits further or weakens the behavior, whereas seeing a model rewarded for tearing a page from a book disinhibits or strengthens the response of the observer. Third, observing a model may have the effect of eliciting previously learned behavior that has not been manifested recently. The difference between the disinhibiting effects of imitation and the eliciting effects can be determined only by knowing the history of the observer. The extent of imitation depends mainly on two factors: punishment and reward. The observer will tend not to imitate if the model is punished for his behavior; however, if a certain behavior brings reward, the observer is more likely to imitate. Individual characteristics and circumstances of both the observer and the models also are influential. Imitation is stronger in observers who lack self-esteem, or competence, or who believe they are very similar to a model. One is also more likely to imitate if in the past he has been rewarded for imitating another's behavior. Models who are perceived as powerful, competent, and prestigious are imitated more readily than models not exhibiting these characteristics.

A response may be made for the first time after observing a model. It is strengthened through reinforcement. For example, a child goes to his seat quietly after seeing a model do so. The model's praising the child for doing so increases the strength of the response. Even when reinforcement by an authority figure such as a parent or teacher is intermittent, rather than near 100%, it has a strengthening effect. On the other hand, removing positive reinforcers, such as taking away a privilege, or using an aversive stimulus, such as pinching the child, may lead to temporary inhibition of undesired responses. Rewards and punishments are discussed more fully in the next section.

Real-life models may be available to children in the school setting in one-to-one relations, in small groups, in class-size groups, and in

large groups. Teachers and other members of the instructional staff are potential models for many children. In connection with the system of motivation, their first responsibility is to portray the prosocial behaviors of the type previously noted in Table 1. Further, they select and bring other models into the school setting, making sure that children of all races, ethnic groups, and social classes may have adults and other children to imitate. These models then manifest desired behaviors. The teacher in the presence of the children and model shows approval of the model's prosocial behaviors and subsequently rewards the child for imitating the model.

PROVIDE FOR VERBALIZATION OF PROSOCIAL VALUES

Behavioral objectives related to motivation were stated earlier in Table 1. They provide the basis for the staff of a school building to set objectives for the school. With minor restatement, they may also become the objectives for the students. Student verbalization of prosocial values related to motivation serves three purposes.

First, ability to state the values provides some indication that the student cognizes them. It is possible that some students are not aware of the prosocial behaviors which the school desires of them. If so, they may manifest behaviors that the teacher regards as asocial or antisocial rather than prosocial, simply because they do not discriminate between prosocial and other behavior.

Second, ability to verbalize the prosocial values permits discussion and reasoning concerning them. One of the objectives related to conduct is "Conserves own and other's property." For a 7-year-old, conserving own property may be stated in several subobjectives such as "Stores hat and coat properly when arriving at school," "Does not tear clothing," "Opens book properly," "Does not mark or tear books." The child who yet writes in a book may wonder why he should not do so. Another who drops his boots or coat wherever he removes them at home may ask why he should always put them in a certain place at school. In discussion of prosocial behavior the child learns how his actions may affect him favorably or adversely now and in the future and how they may affect others now and in the future.

Finally, stating prosocial values and reasoning about them should lead to full acceptance of them by the individual. In turn, these values then comprise the individual's own motivational system so that, independent of adults or of other authority, he tries to learn well, sets realistic goals, commits himself to achieving the goals by socially approved means, continuously examines his own value system, and contributes to changing conditions in order to permit others greater opportunity for learning and self-realization. Thus, as the child continues in school, he becomes increasingly self-directive in connection with learning and conduct.

It is not anticipated that relevant prosocial values will be verbalized, understood, and accepted during any one year of school. The values and related behaviors change somewhat with increasing age. However, they may be stated and discussed in one-to-one settings and in groups of varying size. Illustrations of a school-wide program are presented in a later section.

USE REWARDS AND PUNISHMENTS AS NECESSARY

A reward is treated here as something given one person by another person or group which brings pleasure or satisfaction to the recipient. Mechanical means may be used to dispense rewards; they need not always be given in person. Rewarding takes many forms, including approving verbally with words and comments, approving nonverbally by nodding and smiling, giving good grades, toys, and other things, providing for pleasurable activities such as playing ball and operating the movie projector, and providing food, activity, rest, and other things and conditions to satisfy basic needs. Our concern here is not with self-reward. Arriving at a correct solution to a problem may serve as a self-reward, as positive reinforcement for the responses leading to the solution. We have treated this in the prior discussions of the competence motive and the feelings of success associated with goal attainment and making progress toward a goal. Also, by definition, a reward brings pleasure or satisfaction to the recipient. What may be pleasurable for one, for example, calling attention to his appearance that pleases the teacher, may be painful to another. Therefore, motivation based on manipulation of rewards must be suited to the individual.

When a child is rewarded immediately after a response or series of responses and knows that the reward is given for the response, there is a tendency for the response to be strengthened. Also, if a reward is promised for similar behavior, the probability is increased that the child will try to produce the desired behavior again. For example, an objective in Table 1 is stated as "Starts to work immediately." The

teacher's rewarding a child for so doing and then promising to do so again increases the probability of the child's starting to work immediately. Similarly saying "Good," praising the child warmly, and smiling when he persists at tasks tends to strengthen the persisting behavior of many children. In this way rewards following certain responses serve as positive reinforcers of those responses. From the standpoint of motivation, wanting to get the reward or expecting to get the reward directs and sustains effort on the task.

As stated earlier, some children are highly motivated and do not require the use of many rewards. However, others do not want to learn well or to behave in accordance with generally accepted rules; rewards may be used with these to secure better motivation for learning and conduct. For these, the school identifies relevant rewards for each individual child and uses them effectively. An effective reward system does not require competition among children nor do the higher-achieving, better-behaving children get larger or more frequent rewards. On the contrary, the child requiring most frequent rewards for starting work promptly is the one who does not habitually start work promptly. He is rewarded the first time he starts promptly, is promised rewards for starting promptly in the future, and is rewarded when he does so. He is also reasoned with, and the amount and frequency of rewards is gradually decreased as his behavior improves. Through a combination of rewarding and reasoning, his prosocial behaviors become stable. Similarly, the child who has not read a book independently may profit from receiving rewards for reading paragraphs and pages, rather than not being rewarded until a whole book is read. When he reads a book with relative ease, he may be rewarded only for reading an entire book. In general, rewards are given more frequently at first and then are eliminated gradually. At present, we know of no better way to get children to demonstrate prosocial behaviors, such as starting to work promptly or conserving property, than by providing exemplary models rewarding the child for starting work promptly and reasoning with him concerning why he should do it. In this way it should not be necessary to increase the amount and frequency of rewards as the child gets older. On the contrary, the child who may have been rewarded until age 8 or 10 for starting school tasks promptly should do so thereafter with no rewards or reasoning. It is noted, however, that adults, including educational personnel, may perform more and higher quality work when promised additional pay or better working conditions.

A punishment, by definition, brings pain or dissatisfaction to the recipient. Punishment takes many forms, including the withholding or withdrawal of anything that serves as a reward, disapproving verbally or by nonverbal expressions, threatening verbally or by nonverbal expressions, giving low grades or other indications of unsatisfactory work or conduct, removal from a desired situation, and depriving of basic needs. Punishments may be administered by groups as well as by individuals.

Receiving a punishment immediately following a response may weaken the response, or it may lead to the recipient's temporarily suppressing the response or to the recipient's suppressing it only in the presence of the punisher; or it may result in evasion of, or open aggression against, the punisher. Being promised a punishment for not performing a task may lead to performance of the task or to avoidance of the task, the punishment, and the punisher. Being promised a punishment if a specified antisocial behavior is manifested may lead to nonmanifestation of it or to avoidance of the punishment and punisher while yet expressing the antisocial behavior. In addition, punishment may result in undesirable anxiety in the child, negative feelings toward the punisher, and negative feelings toward school.

Punishment and threat of punishment are misused extensively, especially from the standpoint of the form, the severity, and the timing of the punishment. The performance of school tasks should not be used as punishments: being required to do additional work or extra assignments, staying in the building or classroom to do school work at times when other students are doing other activities, and coming early or staying late to do school work. Using these forms of punishment results in an effect opposite from that intended. It creates a disliking rather than a liking of school and school learning tasks. If used at all, these activities should be utilized to reward good conduct and manifestations of motivation to learn rather than to punish for misbehaving or not wanting to learn well. Also, verbal insult, rebuke, and attack are used widely but ineffectively to curb aggressive behaviors. They are ineffective because they tend to reduce aggressiveness only in the presence of a strong authority figure but to increase it in his absence. Further, the punisher models aggressive behaviors which the children may imitate.

The severity of a punishment is difficult to predict. Some acts intended as punishments do not result in either pain or dissatisfaction to the individual. On the other hand, a punishment may be so severe that it causes the child continuing acute anxiety or permanent dislike of the punisher. When punishment is used, it should be sufficiently severe to cause temporary

pain or dissatisfaction and yet not produce undesirable longer-term effects.

The timing of punishment is also critical. To be effective punishment should be administered in the initial phase of an undesired response, rather than immediately after or long after the undesired response has been completed. Once started, the punishment or threat thereof continues until the child ceases the undesired response and preferably demonstrates the desired response. In turn, a reward is administered at the cessation of the undesired response or upon manifestation of the desired response. The rewarding at this time has two important effects. It strengthens the desired response and dispels possible ill feeling which the child may have generated toward the punisher.

The withdrawal or withholding of rewards, including privileges, serves better as punishment in school settings than does inflicting painful stimuli. For example, going to the instructional resource center to read, listening to a record, or using the tape recorder may be a privilege, or reward, for getting a prior task accomplished well. Not being able to do so may serve as a punishment, and it can be readily withdrawn or withheld until the child manifests the desired behavior. Withholding or withdrawing juice or milk may also serve as punishment for young children. The juice is withheld until the child manifests the desired behavior and then it is given to him, thus immediately reinforcing the desired response. Saying words such as "Good," "Excellent," and "Fine," smiling at the child, and making other gestures which serve as rewards may also be withheld, thereby serving as punishments. In general, if the teacher's approving and affectional behaviors toward the child operate as a reinforcer of his desired responses, then withholding or withdrawal will serve as a punishment or threat of punishment and can be used effectively to control behavior.

Pinching, slapping, pulling hair, and other corporal punishments are properly avoided. However, causing a student to exercise by running, walking, or standing is sometimes done effectively. For example, a marching band started its practice 1 hour before the regular opening time of school. Any tardy student first ran around a large area twice, then joined the band. There was little tardiness, and the latecomers, including girls, did not seem to lose enthusiasm for the band. Similar relevant physical activities may serve as physical punishment for other undesired behaviors.

Extinction of responses is accomplished by nonreinforcement, by giving no form of reward or punishment following the response. Many teachers report that minor misbehaviors are best dealt with by the teacher's ignoring them. Ignoring, or withholding of attention or approval, may be interpreted by the child as a punishment rather than as a neutral condition. Further, the teacher's calling attention to the misbehavior may serve as a reward for some children, strengthening the misbehavior rather than suppressing or eliminating it.

In summary, promising and subsequently giving rewards for desired conduct and performance can be used effectively to increase motivation. The withholding or the withdrawing of rewards is probably the most feasible punishment that can be employed to eliminate undesired behavior and increase motivation. If a school has motivational problems after doing its best with other positive procedures as outlined earlier, it might identify first what is rewarding for each child who presents a problem and then follow procedures as outlined here dealing with the use of rewards and punishments.

Reinforcement of desired behavior is readily accomplished in one-to-one, small-group, and large-group settings. Further, reinforcement of an observable response of one child by the teacher may also serve as a reinforcement for a similar nonobservable response made by other children in the group. Written comments may be also used in one-to-one, small-group, and large-group settings.

AVOID PRODUCING ACUTE ANXIETY

Schooling presents some anxiety to most children. Mild anxiety probably heightens activity and facilitates learning. However, when anxiety becomes acute or chronic, it produces disorganization of cognitive responses. The anxious person does not concentrate well on learning tasks and does not perform as well as he might in other ways.

Trying to attain a goal is accompanied by some tension. Threat of loss of love is also accompanied by anxiety. Sometimes good students experience acute anxiety about not receiving A's. Others become unduly anxious about not learning sufficiently well or not securing approval of a teacher or parent. In order not to produce acute or chronic anxiety, the school identifies children who seem to be unduly anxious and deliberately reduces, rather than increases, the level of stress in the school situation.

III

BUILDING-WIDE ACTIVITIES AND PROSOCIAL BEHAVIORS[2]

The behaviors listed as objectives of a system of individually guided motivation (Table 1) may be regarded also as samples of prosocial behaviors that children may observe and imitate, state and discuss, and use as individual goals to attain. The principal and two unit leaders of the Wilson Elementary School, Janesville Public Schools, Janesville, Wisconsin, and other teachers developed a plan to achieve these purposes. They outlined a few activities that might be undertaken in the whole building, in large unit-size groups of 90-175 children, in smaller groups of 2-30 children, and in one-to-one relations.

WHOLE-SCHOOL ACTIVITY

A student council may focus part of its activities on identifying, stating, and encouraging prosocial values to be learned by children of the school. Five representatives of each of the five units of about 150 children each may form the student council which is led initially by the building principal or unit leader. Later, the children take a more active leadership role. Prosocial behaviors such as the following are identified and discussed in the student council:

1. Obey school rules;
2. Be courteous to others;
3. Be considerate to others;
4. Respect public and private property;
5. Show appreciation to others.

The statements are discussed subsequently in the units in larger and smaller groups so that relevant behaviors may be identified for children of varying ages. In the student council meetings and in other school settings, children who manifest the prosocial behaviors are rewarded by authority figures, thus making it possible for them to serve as models for other children.

The student council also arranges for school-wide programs in which real-life and other models are brought to the school. The use of television programs and sound-motion pictures is managed as readily as real-life models. Here, also, close coordination with unit activities is required, especially since relevant models for young adolescent girls at age 12 differ from those for boys at age 6.

LARGE-GROUP ACTIVITIES

The instructional and research units of the Wilson Elementary School have 150 or more children. At any time when the entire group of children meets together or when it is in subgroups larger than 30, any of the following activities are possible.

Prosocial behaviors identified and discussed in the student council, or originated elsewhere including in a unit, are brought to each unit for further clarification and discussion. The unit leader and teachers decide how much and what part of them are relevant for larger and smaller groups within the unit. The objective is to get students to identify and state relevant behaviors in a general way and eventually to have each student identify a relevant set for himself that becomes his goal to attain. A warm, supporting-group atmosphere facilitates acceptance of and commitment to group-originated values.

When any student manifests prosocial behavior, the teacher reinforces it with a reward. Also, the entire group may be promised a reward for manifesting a specified prosocial behavior. Those children who habitually manifest prosocial behaviors may be put in leadership roles and their prosocial behaviors are rewarded in

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[2]The original draft for this section was prepared by a group of students, chaired by Norman Graper, Principal, Wilson Elementary School, Janesville, Wisconsin, as a term paper in a course conducted by Herbert J. Klausmeier.

the presence of other children. Further, the instructional staff and student leaders reward any prosocial behaviors of these children who do not manifest them regularly.

Real-life and representational models are brought into large groups, as noted earlier. The instructional staff in the presence of the children shows approval of the model's prosocial behaviors. Discussing "why" with the model or following a pictorial presentation is probably as useful as having the prosocial behavior manifested.

Student panels, sociodrama, and other dramatizations are organized using themes and situations based on the prosocial behaviors indicative of motivation (Table 1). Although many students will have stated and accepted the behaviors in general, they also profit from finding further applications and also from discussing the "why" of the behavior. Further, they will probably, with increasing learning and maturation, continuously set more mature goals, or at least express the prosocial behaviors in more mature forms. No rough estimation can be given as to the amount of time spent profitably in this type of activity.

SMALL-GROUP ACTIVITIES

All of the activities outlined for large groups are appropriate for smaller groups. The two principle criteria for using the larger or smaller group are effective use of the time of the models and the extent to which learning may be accomplished by observing, rather than by participating and discussing. Thus, if the baker or dentist is available for only 1 hour, the entire unit may observe and subsequently discuss. If the nurse or the pop singer is available for a half day, there may be a combination of large and smaller groups. The observation of prosocial behaviors may occur in large groups; the discussing and reasoning about them is more effective in small groups.

A more specific procedure has been used effectively in smaller groups. Two hand-puppets are developed by the teacher: one representing a well-prepared child that had been given an oral reading assignment and the other a child who did not prepare his assignment. Two older children are taught to be the voices of the puppets. The puppets are given names other than those of the children. A stage is also improvised. The puppets are seated on a bench with the two helpers crouched behind them. Each puppet has a book on a table in front of him.

Joe, the first puppet, is slumped in his seat, and George, the other puppet, is sitting in an posture. Joe begins reading in a halting fashion, using his finger to point out words and moving his head in a jerky way. He "loses" his place frequently and has to start over again. He reads through periods and does not use the right vocal inflections for questions, exclamations, etc. George launches into his story with obvious familiarity. He reads smoothly and shows his attention to the story with his voice and his body. The stories are of about 3 or 4 minutes' duration.

At the end of the "performance," the audience is asked to comment on the two puppets. The children note what was good about George's performance and point to Joe's difficulties. The teacher indicates her preference for George's performance and what made George's reading pleasant for listening.

The points of good posture, familiarity with the story, reading the way he would tell a story if he did not have a book, helping to show what the story meant by his voice and body, and the attention he showed to providing enjoyment for his listeners are brought out in a short period of time. Little, if any time, is spent discussing Joe's poor reading.

This procedure has proven effective with children from 6 through 9 or 10 years of age. It is used in both small and large groups. Comparison and reasoning are employed by the children to determine not only the proper techniques to use while reading orally, but also to understand why the results are better for the individual and the group.

ONE-TO-ONE ACTIVITIES

One-to-one teaching of a child by an adult is not economically feasible for all children for the total day. It would require one adult for each child. However, each child should receive the undivided attention of an educational worker for at least 10 minutes per week (thirty children require 300 minutes, about 5 hours of an adult's time, not counting about 5 minutes to start and end a personal session). Also, some children require much more than 10 minutes per week.

Goal setting requires that some time be spent with the individual, particularly when he is getting started in goal setting. Also, some discussion with the child may be helpful in understanding his attitudes and abilities. In connection with the prosocial motivational behaviors, the teacher introduces a form, such as Figure 3, to be used by children who can read. The form serves as a basis for goal setting by the child, for assessment of the child's current behaviors by the teacher and child, and

Name _____ Sex _____ Age _____

Date _____

	Seldom	Sometimes	Most Times
1. I listen to the teacher.			
2. I begin school work promptly.			
3. I correct mistakes.			
4. I work until the job is finished.			
5. I work when the teacher has left the room.			
6. If I make mistakes, I still continue to work.			
7. I arrive at class on time.			
8. I work on learning activities in free time.			
9. I do extra school work.			
10. I participate in class projects.			
11. I read during free time.			
12. I ask questions about school work.			
13. I have pencil and paper ready when it is needed.			
14. I move quietly to and from my classes.			
15. I listen to the ideas of others.			
16. I help my classmates with their problems.			
17. I pick up when the work is finished.			
18. I take good care of my clothing, books, and other things.			
19. I take good care of the school's books, desks, and other things.			
20. I do what the teacher asks me.			

Figure 3. Self-Assessment Sheet of Positive Terminal Behavior

for discussion and reasoning about prosocial behavior. The form probably needs more specific statements for younger children. For example, "I begin school work promptly" may need to be redefined in terms of the number of "starts" during the day or week that are needed in order for the child and the teacher to check "Seldom," "Sometimes," or "Most Times." At regular intervals the teacher and student compare their checks. More important than the checking, however, is the clarification of what each statement means in practice and the eventual systematic manifestation of the prosocial behavior by the child.

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IV
APPLICATIONS IN ONE-TO-ONE RELATIONS

Setting and attaining realistic goals in connection with subject-matter knowledge and skills is an important complex of intellectual skills, learned through practice. Several generalizations related to motivation are illustrated first in a description of adult-child conferences and goal setting in mathematics and second in a description of adult-child conferences designed to encourage independent reading. In the last part of this section are outlined procedures for having older children work with younger children in reading.

ADULT-CHILD CONFERENCES AND GOAL SETTING IN ELEMENTARY MATHEMATICS[3]

The purpose here is to describe in detail the objectives and implementation of short, weekly goal-setting conferences used in conjunction with instruction in mathematics. In the first conference, the adult outlines the purposes and procedures and presents the child with part of an individual progress folder, a sample page of which is presented as Figure 4[4]. In a subsequent conference, the adult locates the child on the folder by ascertaining what he can do and what he cannot do. (This may have been done before the conference.) Upon determining what the child knows, or can perform now, a goal is set for a week hence. That is, a decision is made as to what the child will perform next week. For example, if the child now reads and writes the numerals to 10, the decision may be made to learn to write the numerals to 20, without error, 1 week hence.

The objectives of conducting the goal-setting conferences may be considered as four related sets. The first set involves getting the child to manifest the 10 behaviors indicative of high motivation with regard to learning previously given in Table 1:

1. Attends to the teacher and other situational elements when attention is required.
2. Begins tasks promptly.
3. Seeks feedback concerning performance on tasks.
4. Returns to tasks voluntarily after interruption or initial lack of progress.
5. Persists at tasks until completed.
6. Continues working when the teacher leaves the room.
7. Does additional work during school hours.
8. Works on school-related activities outside school hours.
9. Identifies activities that are relevant for class projects.
10. Seeks suggestions for going beyond minimum amount or quality of work.

The remaining three sets of objectives of the conference are related more specifically to improvement in skills and attitudes related to mathematics. Thus, the second objective of the conference is that the child's mastery of mathematical concepts and his problem-solving skills improve more rapidly during the period of goal-setting conferences. Third, the child is able to solve progressively more difficult problems. Fourth, the child who prefers mathematics increases his preference. The conferences will achieve these objectives to the extent that motivation for learning mathematics is higher outside the conference periods; that is, the child attends more closely to completing mathematical tasks which he wants to complete and finds an appropriate difficulty level.

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[3]The procedures for these conferences were developed initially in Stephen Bull Elementary School of Racine, Wisconsin, and were subsequently refined in Franklin Elementary School, Madison, Wisconsin.

[4]Developed by Dr. John LeBlanc, formerly mathematics consultant for Racine Unified School District No. 1.

PLACE VALUE

- ☐ Read and write numerals to 100.
- ☐ Read and write numerals to 1000.
- ☐ Read and write numerals to 10,000
- ☐ Count by: 2's to 100
- ☐ 10's to 300
- ☐ 4's to 100
- ☐ 5's to 150
- ☐ 3's to 99
- ☐ Write numerals for sets of tens and ones.
- ☐ Regroup for addition and subtraction.
- ☐ Write numerals for sets of hundreds, tens, and ones.
- ☐ Illustrate a numeral for hundreds, tens, and ones.
- ☐ Write numerals for sets of thousands, hundreds, tens, and ones.
- ☐ Explain tens and ones; for example, 12 means 1 ten and 2 ones.
- ☐ Write numerals showing tens and ones.
- ☐ Explain ones, tens, and hundreds, for example, that 245:
- ☐ is 2 hundreds 4 tens 5 ones
- ☐ is 200 + 40 + 5
- ☐ Explain place value for example, that 2872 is:
- ☐ 2 thousands 8 hundreds 7 tens 2 ones
- ☐ 2000 + 800 + 70 + 2

Figure 4. Sample Section from the Individual Progress Folder

The objectives are achieved during the conference period through (1) setting goals with the child, (2) providing models of desired behaviors related to mathematics for the child to observe and imitate, (3) reinforcing the desired behaviors and attitudes of the child related to mathematics, and (4) informing the child of his progress in mathematics.

In connection with goal-setting, the adult may set the goals related to mathematics for the child to accept, have the child participate in the goal setting, or allow the child to set his own goals. The adult may observe the achievement and recent progress of the child and on this basis decide what the child should do next. What to do next is then made clear to the child. Instead of proceeding independently, the adult may discuss with the child his recent progress and also what will be done next. Here the adult may take primary initiative. In the third case, the adult and child discuss progress thus far, possible next steps and accomplishments, but the child decides what to do next and thus sets his own goal. High-achieving students tend to perform best when encouraged to set their own weekly goals, while students low in previous achievement tend to perform best when their weekly goals are set for them. As the conferences continue, however, each child should be given more and more responsibility for setting his own goals. It should be clear, of course, that both the

students and the adult must know what comes next in relation to current progress in order for any kind of goal setting to be successful.

During the conference, the adult models the desired behaviors for the child to observe and imitate. For example, the adult makes only favorable statements about learning mathematics. Also, the adult uses other procedures such as working exercises in the presence of the child, showing a picture of a possible model engaged in mathematics activity, informing the child of the mathematics activity of a possible model, and indicating the values of mathematics to other persons who may serve as models for the child.

The adult reinforces the child for progress made during the week by offering approving words and comments, or by nodding, smiling, and other nonverbal means. Errors may also be identified and corrected during the conference. In addition, the child is encouraged to continue. Thus, it is important that a realistic goal is set at each conference and that the child does make some progress between conferences. The conference will surely fail if the child makes little or no progress and thus does not manifest achievements which can be reinforced.

In order for the child to make progress and to be informed of it weekly, some type of progress folder is needed. A sample page is shown in Figure 4. This page has squares which can be colored or marked in some other manner when the child performs a given task correctly. These tasks were not designed to be accomplished in 1 week. What may be a reasonable task during a week requires further analysis by the adult.

One way to handle the instruction related to the content of the charts is to group the children who are at about the same achievement level. In a unit or team plan, 125 children may be put into 10 or more groups. Each group may then be given a weekly test. The test proper may be scored and subsequently serve as a basis for assessing progress at the start of the conference. Enrichment activities may be provided for those who progress rapidly, and one-to-one remedial work may be used with those whose progress is less rapid. Further, regrouping may be done frequently whereby those making rapid progress are placed in more advanced groups and those making less progress remain in a current group. As yet, neither computer-assisted instruction nor autoinstructional materials are sufficiently advanced to permit each child to proceed completely independent of a teacher.

The preceding outline is descriptive, not prescriptive. A brief summary of the more important points and some alternative procedures are now given:

1. Goal-setting conferences involve a one-to-one relationship between an adult and a student on a regular basis during which the adult sets goals for the student, the student sets goals for himself, or the adult and student jointly set the student's goals. Every child should have an initial conference during which he is told the purpose of the conferences and how they are to be conducted. An individual record sheet should be available at the first conference and shown to the student with the explanation that the child will keep track of the student's achievement in relation to the goals that are set.

2. Each conference always includes positive social reinforcement of desired behaviors and attitudes related to mathematics. Concrete rewards may be given in some cases if necessary. Punishment and threat of punishment are not used.

3. The adult manifests desirable attitudes toward mathematics and also demonstrates correct performances in mathematics in the presence of the child.

4. An individual record is kept for each child. The record consists of the specific subject-matter achievements of the student, as well as a description of the concepts and skills to be learned in the future.

5. Conferences are held systematically with respect to length of the conference and spacing between conferences. Weekly conferences of 5 to 10 minutes work well with children of about age 8. Once children set goals realistically and achieve reasonably well, the conferences need not be so frequent but clearly specified times should be set.

A few problems that require attention are frequently raised by teachers. The first concerns the number of subject-matter areas for which conferences might be relevant. A primary purpose of the procedures in this section related to elementary mathematics is for the teacher and the children to gain experience in goal setting. However, spelling or reading might be used equally readily as mathematics. It would be well to start in one subject-matter area, however, rather than all. Most schools do not yet have record folders in any subject-

matter area. It is possible that if the instructional program is organized to permit goal setting as outlined and if the conferences are successfully conducted, the staff can then decide whether and how to proceed in other curriculum areas. At present many children are not receiving 5 to 10 minutes of undivided attention of an adult per week. Their motivation for school learning is low and their attitudes toward teachers and school are negative. Individual conferences as outlined can overcome these problems for many children.

A second problem is concerned with whether the teacher, aide, or other adult should conduct the conference. The authors recommend that the teacher should conduct the goal-setting conference. A high degree of professional judgment is involved in appraising the child's current level of achievement and deciding what may be a relevant set of tasks for the future. Further, the child should perceive the teacher as a helpful reinforcing person, as a model, interested in the child as an individual human being, not merely as one of a group. Paid and voluntary aides and older children may well participate in conferences for other purposes.

A third problem involves evaluation of the conference. Here two things may be done. First, about once a month the teacher observes and rates the child's performance during mathematics instruction on the first 10 items of the schedule given in Figure 3. Ratings of children whose motivation is initially lower, to the left, should be rated to the right at successive time intervals. Second, careful scrutiny can be given to the child's progress through the record folder. If the conferences work well, the child will make continuous progress; few if any children will manifest little or no progress over an extended time period. More attention is given to evaluation later in this paper.

ADULT-CHILD CONFERENCES TO INCREASE OUTSIDE READING[5]

Conferences may be used to increase the child's amount of independent reading.

The behavioral objectives for the reading conferences are derived from the objectives of the total system of motivation as described in Table 1. Specific objectives related to reading conferences can be classified into three areas as follows:

1. Behaviors indicative of motivation which are general in nature and necessary for successful relationships to exist between the adult conducting the conference and the child. These behaviors include:
   a. The child comes to the conference on time.
   b. The child attends closely to the adult and other situational elements during the conference.
   c. The child begins his report promptly.
   d. The child reads from his book when asked.
   e. The child takes good care of books he is reading.

2. Behaviors related specifically to the child's reactions to reading. These behaviors include:
   a. The child expresses pleasant feelings about reading.
   b. When asked, the child tells about what he has read.
   c. When asked, the child tells why he reads.
   d. The child talks with other children and/or adults about his reading.
   e. The child reads on his own when adults are not present.
   f. The child goes beyond the minimum reading requirements for his group.

3. Behaviors related to improvement of independent reading skills and reading achievement. These behaviors include:
   a. The child independently reads more books, or longer books, or more difficult books during school hours and/or outside school hours during the period following initiation of the adult-child conferences. Teachers should probably set a desired range and level of books for a child to read during a month or some other specified period of time; i.e., one to four books for primary children where the books usually contain only a few pages and two to six books for intermediate age children where books are considerably longer.
   b. The child reads more rapidly after initiation of the adult child conference.
   c. The child's word recognition skills and reading comprehension improve more rapidly during and after the initiation of the conference situation.

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[5]The procedures for these conferences were developed initially in the Stephen Bull Elementary School of Racine, Wisconsin, and were subsequently tested in the Franklin Elementary School of Madison, Wisconsin.

d. The child's preference for independent reading increases for a child who found reading low on his list of preferred activities and remains constant for a child who preferred reading as an independent activity.

The objectives are achieved through the adult providing models of desired reading behaviors for the child to observe and imitate, reinforcing the desired reading behaviors and expressed attitudes of the child, informing the child of his progress in reading and aiding him to overcome difficulties, encouraging the child to continue to read, and helping the child select a next book, or books, of an appropriate difficulty level related to the child's current interests. Very little time is spent on any one of these during one conference, and not all need to receive attention at every conference.

The adult models desired reading behaviors for the child to observe and imitate by such procedures as stating to the child that he (the adult) reads frequently and likes to read, by starting to read a book as the child leaves the conference and by being engaged in reading when the child comes in for the conference. Also, the adult may use other procedures such as showing a picture of a possible model reading, informing the child of the reading behavior of a possible model, and indicating the values of independent reading to other persons who may serve as models for the child.

The adult reinforces both the independent reading of the book that the child reports and also attitudinal statements made by the child about reading. The reinforcement takes the form of smiling, nodding affirmatively, stating "good," "fine," etc., and raising questions and indicating approval of responses indicative of desired attitudes.

The adult informs the child of any progress made in reading by telling the child how many books or pages in a book he had accumulated. As the child discusses a book, he may indicate a word that he cannot recognize, that he did not understand a central idea, or that he did not enjoy the book or part of it. Without taking much time, the adult may assist the child with any of these and in a subsequent conference mention it as an area of progress.

The adult verbally encourages the child to continue to read while helping the child select the next book of an appropriate difficulty level. In early conferences this may take half of the total conference time, especially if the capabilities and interests of the child are not known by the adult. Here the adult should have directly at hand a number of books that can be shown to the child from which a selection is made. If a selection cannot be made in a few minutes, the child might take more time and simply report in a later conference which book(s) was selected. School and other librarians may be especially helpful with children who read reasonably well and already have experience in selecting books. Thus, with beginners the adult spends considerable time in the encouraging and selecting. Total responsibility for selecting the next book is taken by other children. Thus, this is not a prescriptive procedure; the adult's procedures are determined by the characteristics and capabilities of each child.

It may be helpful to outline in more detail the procedures involved in implementing the conferences. Essentially, the conferences involve a one-to-one relationship between an adult and a child during which the child reports on any books he has read. An individual record is kept for each child by the adult; older children also may keep their own records. The record contains a list of all the books the child has read and reported on. For children who have not read a complete book, a record of pages read in a book is also kept initially. Figure 5 contains a sample record sheet. The conferences, which always include positive social reinforcement of desired reading behavior and attitudes, are held on a systematic basis. Every child has an initial conference during which he is told the purpose of the conferences and how the conferences are to be conducted. An individual record sheet is made out at the first conference and shown to the child with the explanation that the adult will keep a list of books or pages the child has read. Thereafter, conferences are held both regularly and perhaps on an intermittent basis. There is value, at times, for the "spontaneous conference."

The length of the conferences should be flexible; however, a period of from 5 to 10 minutes is probably sufficient to properly carry out the objectives of the conference.

The conferences can be held almost anywhere where it is reasonably quiet: a corner of the library, the learning center if there is one, even out in the hall. The times during the day or the days of the week that the conferences are held depends upon the person or persons holding the conferences. Noninstructional time such as recess, noon, or before and after school can be used as much as possible.

Each child should be directed to books which are on his level and which will be of interest to him. This means finding out the interests of the child. Also, each child's reading level should be known. As the child's skills improve he can be directed to more difficult material.

Student's Name _____ Reading Teacher _____

Grade _____ Age: Years _____ Months _____

Reading Achievement Level _____

Number of books read during each week of baseline period:

Week No. 1 ____ 2____ 3____ 4____ 5____ 6____ 7____ 8____

Any special characteristics of child which may help in conducting conferences:

_____

_____

_____

_____

Record of Conferences

Date	Book Titles	Comments (Note any special problems; concrete rewards given.)

Figure 5. Sample Record Sheet

Some advance preparation on the matter of reading materials is necessary. It is suggested that the librarian together with teachers at each reading level gather books and classify them as to difficulty: easy, grade level, and difficult. Also, books may be classified as to interest area. Each child then is directed to the appropriate level for him.

Thus far in this section applications of motivation principles in one-to-one relations between an adult and a child have been described. Another promising technique also involves the one-to-one relation; i.e., that between older children who act as tutors and younger children.

THE USE OF OLDER STUDENTS AS TUTORS AND MODELS IN ELEMENTARY SCHOOL READING[6]

A purpose of the system of individually guided motivation is to meet the needs of the individual student more effectively. The tutorial relationship is recognized as an ideal teaching-learning relationship because it is presumably geared to the individual student's needs. In the outline which follows, older children help younger children with reading. Other curriculum areas might be utilized equally well. The objectives of the tutorial sessions in reading now follow:

A. The child manifests the 10 behaviors indicative of high motivation with regard to reading.
   1. The child is on time and present for each conference.
   2. The child attends closely to the teacher and other situational elements during the conference.
   3. The child begins his report promptly.
   4. The child reads from his book when asked.
   5. The child expresses pleasant feelings about reading.
   6. The child reads when adults are not present.
   7. The child goes beyond minimum reading requirements for his group.
   8. The child takes good care of books.
   9. The child talks with other children and adults about his reading.
   10. When asked, the child tells why he reads.

B. The child's oral reading skill improves with respect to such subskills as omissions and additions, as well as repetitions and mispronunciations of words.

C. The child's word recognition skill improves.

D. The child's preference for reading increases for a child for whom reading is little preferred and remains constant for a child for whom reading is highly preferred.

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[6]The procedures were developed initially and tested in the Adams Elementary School of Janesville, Wisconsin.

Presumably because of his greater competence and age, the older student may serve as a model for the younger student. The older student manifests behaviors for the younger student to observe and imitate. More precisely, the older child models (1) oral reading behaviors when reading aloud to the younger child, (2) correct pronunciation and enunciation, (3) word recognition skills when pointing out why the younger child has made an error, (4) attention to the reading task when paying close attention throughout the session, and (5) favorable attitudes toward reading when showing pleasure from his own reading and when reinforcing the younger child.

In a typical session in 2 Janesville elementary schools [Adams and Jefferson] the older child did these things: read orally; listened to the younger child, correcting errors and reinforcing correct responses; and presented flash cards to the younger child, correcting errors and giving praise for correct responses. The teacher of the younger child identified reading material of an appropriate level of difficulty for the younger child.

The older children required some instruction prior to starting actual sessions with the younger child. This was done in groups. Printed instructions were prepared and discussed. Role-playing was also done. A video tape was made of experienced older children working with younger children. In addition, a teacher or aide was present during early sessions to assist an older child who might experience difficulty.

Systematic arrangements were also made for the conduct of the sessions. Two sessions per week, each of 20 minutes' length, were judged to be excellent for younger children of age 7 to 9, tutored by older children of age 11 to 12. The older children were selected by their teachers as being average or above in reading achievement. The tutoring sessions were held in any space that was reasonably quiet. Prior to starting the sessions, the older child was brought to the younger child by the teacher, and the purposes and general procedures were explained.

The older students were also told that each time they met with each younger student, the latter would have a list of the same written instructions as the older students received. They were told that the younger student's teacher would have made a check mark by one or more of the instructions and that that was how they would know what they should do with that student. They were to do the things that were checked on the list of instructions. For example, if a student brought a list and there was a check mark next to No. 3, the older

student would know that they should work with flash cards.

Schedule cards were also given to each of the older students. On these cards were the older student's name and the name of the younger students he would be helping. The card also indicated the day(s), the time, and the place where he would meet the younger child.

The three main sets of activities and procedures which were used by pairs of students in two Janesville schools were these:

1. The older student listened to the younger student read, helping with word recognition. When the younger student failed to recognize a word, the older student simply told him what it was. If he made an error, the older child interrupted to indicate the correct pronunciation. (The reading material used was one level lower than the instructional basal.) In the first sessions, the older student rewarded the younger student after every page he has read by saying something such as, "You're doing fine," or "You're coming along very well." With the passage of time, these rewards were used less frequently, although each session included a liberal amount of praise and encouragement from the older student.

2. The older student alternated the reading of pages with the younger student, the latter following along as the older student read. The older student praised the younger child at the end of each page read by the younger child.

3. The students worked with flash cards. This was put in a game context, the older student saying, "If you say a word correctly, you can keep the card, otherwise I will keep it. Let's see how many cards you can get." When the younger student failed to recognize a word, the helper told him what it was; the younger student then said the word while looking at it. When the younger student had missed five words, these words were reviewed.

   During the first sessions, the older student rewarded the younger student after every two flash words that the latter recognized by saying something such as, "Fine" or "Good." Again, over a period of time, these rewards were given less frequently, the intent being to cease entirely when the child recognized the complete list of 100 words.

   Each session was concluded by having the older student verbally reward the younger student. For example, the older student might say, "I've enjoyed being with you today and I think you are making steady progress. I'll see you _____." The older child was also instructed to show pleasure at the younger child's successes by smiling, speaking pleasantly with emphasis, and offering encouraging words.

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V

MEASUREMENT TOOLS AND EVALUATION PROCEDURES

The final component of a system of individually guided motivation is the evaluative component whereby each student's initial and terminal motivational status is assessed. Any system of individually guided education is doomed unless adequate means are provided for assessing the entering behavior of students related to instructional objectives so that instruction can start with tasks of an appropriate level of difficulty. Moreover, adequate procedures must be available for assessing each child's progress so that both the pace and type of instruction may be fitted to each child's particular needs. Finally, means must be available for assessing the terminal behaviors of students so that an evaluation can be made of how well the system has accomplished the instructional objectives with each child. The same requirements of assessment and evaluation also hold for a system of individually guided motivation.

Because the program of motivational procedures outlined in this paper is an integral part of a total system of individually guided education, it is almost impossible to evaluate the effects of one independently of the other. This is to say the obvious: assessment of progress in subject-matter areas and the growth of cognitive and motor skills are also to a large degree an assessment of motivation. That is, within wide ranges of ability levels, if a child is properly motivated to learn and is provided with proper instruction in a subject matter, then the combination of these factors will manifest itself on any properly constructed instrument designed to measure achievement in that subject matter, be it reading, mathematics, or gymnastics. Thus, motivational procedures such as the adult-child conferences related to mathematics and reading and tutorial sessions utilizing older children as helpers, are largely evaluated by assessing the growth in mathematics and reading skills during the course of the conferences. For example, with the goal-setting conferences in mathematics, does the child color in more squares (e.g., master more concepts) during the course of the conferences? Or, with the conferences on reading, does the child independently read more books or books of greater difficulty? These gains can be measured quite easily (and quantitatively) by comparing each child's behavior during a pre-conference baseline period of several months with his behavior during the course of the conferences.

The importance of establishing clearly defined behavioral objectives for each motivational procedure such as the conference is thus clearly related to the task of evaluation. For each objective the baseline or entering level of each child is assessed and then compared with levels attained during and at the end of the motivational procedure. The measurement of baseline or entering behavior, of course, serves two functions: first, as already mentioned, it serves as a standard of comparison against which to evaluate progress and second, it provides valuable information which allows the motivational program to be fitted to each child's needs. For example, four objectives specifically related to reading were stated for the adult-child conferences (page 25, a., b., c., & d.). For children who do little independent reading, whose word recognition and comprehension skills are low, and whose preference for reading is low, the adult would need to place special emphasis on selecting reading material easy enough for the child, encouraging the child to practice his recognition and comprehension skills, demonstrating positive examples of favorable attitudes toward reading, and providing frequent reinforcement for any progress the child makes, no matter how little. For other children who already have the necessary reading skills, all that is needed is contact with an adult who models desirable attitudes toward reading and who assists in selecting books of interest.

In addition to objectives strictly related to achievement in subject-matter areas, the system of individually guided motivation has as an objective the shaping of the behaviors generally indicative of high motivation listed in Table 1. The school-wide, large- and small-group activities, and the one-to-one activities described in this paper can be evaluated in terms of how well these objectives are reached with each child. One way in which this evaluation can be done has already been discussed. In Figure 5, page 24, a Self-Assessment Sheet of Positive Terminal Behaviors was shown. This record can be kept by both student and teacher throughout the school year. If the record is properly kept by the teacher based on careful and systematic observation, then it will serve not only as a motivational device for the child, encouraging him to manifest the prosocial behaviors, but also as a fairly sensitive instrument for measuring how well the motivation program is working.

Not to be overlooked in evaluating the motivation program are other indications of motivation such as the number of absences for nonhealth reasons and the number of students who are consistently tardy. If the system of motivation is working well these types of behaviors should be minimal.

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