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Source: *The Elementary School Journal*, Vol. 85, No. 4 (Mar., 1985), pp. 541-557

Published by: [The University of Chicago Press](#)

Stable URL: <http://www.jstor.org/stable/1001155>

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# A Cognitive Ethnography and Quantification of a First-Grade Teacher's Selection Routines for Classroom Management

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Descriptions of how effective teachers accomplish classroom management are usually incomplete because they fail to include the plans by which teachers establish and maintain management systems. The result of such an omission is often a tendency to describe classroom management in terms of teacher behaviors rather than as cognitive processes that translate problem solving into motor activity. Although such an emphasis is found in the analysis of most aspects of classroom management, the present study only focuses on obtaining an accurate representation of a first-grade teacher's plan for selecting management strategies during reading seatwork.

Several studies of teacher cognition identify what appear to be recurring factors that teachers mention when thinking about students and their behavior (Borko 1978; Brophy & Rohrkemper 1981; Cone 1978; MacKay & Marland 1978). These factors include objectives to be attained, that is, long-term (vs. short-term) solutions for behavior problems, criteria considered relevant to taking action, and the selection of strategies. Furthermore, researchers note that experienced teachers' management of students is often characterized by well-established routines (e.g., Brophy 1983; Evertson & Emmer 1982; Kounin 1970). What is not understood is just how these routines are linked to teachers' plans.

The theoretical literature gives a number of ways to look at plans. Clark and Yinger (1977) define plans as the "framework for guiding teacher action." In cognitive psychology, it is theorized that plans are derived from abstract knowledge structures called schemes, which people

*The Elementary School Journal*

Volume 85, Number 4

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0013-5984/85/8504-0007\$01.00

employ to generalize an action to other contexts similar in nature (Piaget 1926). Some plans specify the range of alternatives available for achieving an end and identify what conditions or criteria are routinely considered when selecting among these alternatives (Randall 1977, in press; Schank & Abelson 1977). In this paper, a plan is considered to be the mental relationship between the criteria teachers consider and the strategies they routinely select to achieve a goal.

Gaining an understanding of teachers' plans requires a research methodology designed to discover, model, and verify these plans. Ethnography has the advantage over other research methodologies because it provides the tools for focusing on natural settings such as the classroom, uses participants' constructs to structure the research, and describes in depth the participants' perspectives (LeCompte & Goetz 1982). The primary disadvantage of ethnography is that the data are difficult to verify.

In dealing with the threat to validity, cognitive ethnographers have developed methods of systematic, controlled elicitation and formal analytical procedures. The primary strategy involves alternating between direct observation and systematic indirect questioning to discover logically related principles used by individuals and groups to order relevant phenomena. Since the 1960s, a number of intensive field studies have identified the logical arrangement of semantic domains by which people organize their worlds, solve problems, and make decisions (e.g., Casson 1981; Tyler 1969). Many of these studies have produced information-processing models of cultural planning and decision making that were verifiable (see, e.g., Geoghegan 1969; Gladwin 1976; Randall 1977; Young 1980). These models incorporate a wide range of variables and describe the underlying structure by which persons routinely consider variables and apply them in dynamic, naturalistic settings. When represented in

a model that is reasonable and logical, a cognitive process can be validated quantitatively. Thus the link between purposive thought and action becomes demonstrable.

The present study uses cognitive ethnography to examine the relationship between a teacher's thinking about the management of students' behavior and her routine actions in the classroom. The purpose of the study was to discover the characteristics of a teacher's management plan, that is, the relationship between the criteria and strategies routinely selected to achieve certain effects and to depict the plan in an information-processing model that could be validated.

## **Method**

### **Subjects**

The school was located in a blue-collar neighborhood of a large urban school district in the south central United States. The student population—52% Anglo, 27.5% Hispanic, 18.5% black, and 2.1% Asian—was representative of the community. Seventy percent of the students scored at or above grade level on the Iowa Test of Basic Skills (Hieronymus, Hoover, & Lindquist 1978), and 42% received free lunches.

The class of 28 first graders who participated in the study was composed of a cross section of ethnicity (18 Anglos, 3 Hispanics, 4 blacks, 2 Vietnamese, and 1 East Indian) and ability (20% scored high on a standardized test of reading readiness, 55% average, and 25% low). The students had been assigned systematically to classrooms by a committee of first-grade teachers in order to provide each teacher with equal numbers of members of the various ethnic groups, students of varying ability (who were to be assigned to one of three reading groups), students who were repeating the first grade, and those with potential behavior problems (as identified by the kindergarten teachers). (However, one first-grade class was designated as a readiness

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class for students who had scored low on the standardized test of reading readiness.)

The teacher was identified through the recommendation of the principal, who was asked to select an expert manager and teacher. "Mrs. Fisher" (not her real name) was an Anglo-American with 20 years of classroom experience. She consistently approached her teaching responsibilities with energy and enthusiasm, and her peers admired her teaching expertise.

Mrs. Fisher routinely conducted reading for 90 minutes at the beginning of the school day. Generally, groups 1 and 2 had reading for 30-minute periods while the students in group 3, the lowest group, had one short session of about 15 minutes and then received one-to-one assistance as they finished each part of their assignment. The teacher reported that as the year progressed, she moved as many students as possible into groups 1 and 2. Her policy was to keep as few students as possible in the low group and to individualize their programs if necessary. Her daily objective was to make sure each student had learned at least one thing in reading. To ensure that objective, she often had additional reading instruction in the afternoon and routinely used sixth graders to listen to the first graders' oral reading and to check their written work such as the SRA kits. Table 1 gives additional information on the composition of the reading groups during the month of February.

#### *Procedure*

Data were collected over a 5-month period in the spring of 1982. Twenty-three

hours of interviewing and 30 hours of observation were conducted approximately biweekly. General ethnographic techniques, including "grand tour" questions ("Could you describe a typical school day?") and wide-ranging observations of the school were used initially (Spradley 1979). After a general understanding of the school day was gained, the study focused on teacher interaction with students who were engaged in seatwork activities while the teacher was involved simultaneously in small-group reading instruction. This procedure set reasonable boundaries for the study and at the same time emphasized an aspect of schooling that occupied a large portion of this first-grade teacher's day, which appeared to be characterized by well-established routines.

Alternating between observation and indirect questioning, I gradually produced hypotheses about the criteria that governed the teacher's selection routines. These were tested against the teacher's observed behaviors and adjusted as needed. The hypotheses were charted in an information-processing model, which was then tested successfully the following fall with a newly assigned group of students. Before describing the development of the information-processing model, however, it is necessary to discuss some of the teacher's goals and theories of preventive management.

#### *Results and discussion*

##### *Rationale for classroom management*

The various aspects of Mrs. Fisher's rationale for classroom management are

TABLE 1. Composition of Reading Groups by Ethnicity and Sex

	Ethnicity					Sex		Total
	Black	Mex. Am.	Anglo	Viet.	E. Ind.	Male	Female	
Group 1 (bluebirds)	1	1	10	2	1	6	9	15
Group 2 (ponies)	1	0	6	0	0	3	4	7
Group 3 (cowboys)	2	2	2	0	0	4	2	6
Total	4	3	18	2	1	13	15	28

drawn primarily from interviews that occurred toward the end of the 5-month period, when trust had been established between informant and interviewer and more "why" questions were being asked. For example, "Why did you change the seating arrangement?" was one question that became routine when I realized that Mrs. Fisher used the seating arrangement to promote friendships among the students and maintain a positive socioemotional climate, which was one of her management objectives.

Mrs. Fisher's primary reading goal was to create "willing and independent readers." As she stated, "I want them to love to read and not be afraid to read anything." To accomplish this goal, she used a complex seatwork collection of interrelated materials of increasing difficulty, which the students had to work on in a fixed order. Mrs. Fisher monitored this process closely during reading and regularly provided both verbal and written feedback. Her policy is in keeping with research indicating that more effective management is maintained in student-paced activities that are tightly scheduled (Anderson, Evertson, & Brophy 1979). Kounin (1970) found a positive correlation between freedom from deviancy in the primary grades and student involvement in seatwork activities and seatwork variety and challenge.

To motivate students to make use of the materials, Mrs. Fisher's management goal was to encourage them to participate as fully as possible in classroom activities. Her idea seems closely related to the concept of student cooperation, which is a key factor in effective group management (Doyle 1979) and successful direct instruction (Brophy 1979). To achieve full participation, Mrs. Fisher formulated several hierarchically arranged stages that functioned as subgoals or objectives. The first of these involved motivating students to want to be part of the class. "They need to feel they belong," Mrs. Fisher ex-

plained. This socioemotional goal was of special concern early in the year, particularly for students in the lowest reading group. Mrs. Fisher often manipulated seating arrangements and study groups to encourage friendships among the students, while making academic success possible for each student even on the first day of school. Second, the teacher wanted students to practice good citizenship and self-control skills. As she explained, "I want them to correct themselves. If that doesn't work, then I step in." She added, "I want them to do it for themselves and to do it for me." A third subgoal was that students should understand and frequently utilize work-study skills. "They need to learn to concentrate," she said. "I want them to finish their work."

Mrs. Fisher's rationale coincides with Weber's (1982) recommendation that classroom teachers establish management objectives and identify desirable classroom conditions to be encouraged. Her goal statements also lend support to Emmer and Evertson's (1981) contention that "effective classroom management consists of teacher behaviors that produce high levels of student involvement in classroom activities, minimal amounts of student behaviors that interfere with the teacher's or other students' work, and efficient use of instructional time" (p. 342).

Mrs. Fisher frequently spoke of how she created a positive learning atmosphere in her classroom. She had numerous strategies for training students in new behaviors and preventing behavior problems before they arose. For example, she emphasized the true meaning of friendship to her students: "Friends don't get friends in trouble." Also, she believed in giving students enough time to become comfortable with newly learned behaviors, as with any other newly acquired concept, and she let the students know what she expected. Her policy for both management and reading was to "explain the rules clearly to the large group, then to a small group, and then to

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individuals as needed.” She also had a systematic reward and consequence system for reinforcing and extinguishing targeted behaviors of the class, small study groups, and individuals. Again, her practice coincides with the recommendations of researchers. Freiberg (1983) and others (Sanford, Emmer, & Clements 1983) have found that consistency in teacher action and systematic setting of rules, rewards, and consequences prevent problems before they arise. Freiberg (1983) also discusses the importance of developing management strategies for dealing with students as a group and as individuals.

#### *Criteria for selection routines*

To elicit the criteria that the teacher routinely considered in her selection of management strategies, questions emphasized the word “usually.” “What do students usually do when they are off task?” was the pattern question that resulted in the formulation of a list of routinely encountered off-task behaviors. Characteristics of these behaviors were determined by asking the teacher to describe and identify off-task behaviors that occurred during a specific observation. In this way, I developed an understanding of what student actions Mrs. Fisher described as “sneaky,” “disruptive,” “loud,” and so on.

In a card-sorting exercise, the teacher ranked the off-task behaviors according to degree of seriousness. She then grouped them and assigned names to the groups (see Spradley 1979). She accomplished both tasks easily, suggesting that she made frequent use of this category of knowledge. Appendix A shows a wide range of possible misbehaviors. Mrs. Fisher considered “not-tolerated-ever” behaviors, which seldom occurred, to be worse than “very serious” ones, which occurred infrequently. The “very serious” were worse than the “serious” and “minor” off-task behaviors, which I frequently observed during reading seatwork time. She explained that the more “disruptive” and “intentional” an off-

task behavior, the worse she considered it to be. Thus, insofar as they specified the level of seriousness of off-task behaviors, these two characteristics became the elements of the first criterion, “types of off-task behavior.”

Mrs. Fisher generally thought of intentionality as knowing right from wrong; however, she considered a student’s actions intentional to the extent that they disrupted the class. In contrast, sneakiness, such as looking first at the teacher before acting, might not be disruptive, but she considered it to be highly intentional. Brophy and Rohrkemper (1981) also found that the selection of management strategies appeared to be related to the type of misbehavior, the perceived ability of the student to control behavior, and the intentions with which the students acted.

Before completing the discussion of selection criteria that were discovered later, the courses of action Mrs. Fisher preferred to take in training students and solving behavior problems such as “bad habits” are described.

#### *Management strategies*

To discover Mrs. Fisher’s ways of dealing with off-task behaviors, I followed a cycle of observations and controlled elicitation in which I collected examples of strategies the teacher used and later discussed them with her. A useful pattern question was, “What do you usually do when a student . . . [blurts out, wanders around, etc.].?” From answers to such a question, a category of knowledge that Mrs. Fisher termed “strategies” was developed. In her thinking, strategies were of three types, “training,” “correcting,” and “off-the-board.” For the serious to minor off-task behaviors, such as daydreaming, she used training strategies. She ordered them preferentially according to her objective of training students to exercise self-control. Appendix B shows she preferred to omit taking action unless a student needed reminding. If a reminder was necessary,



she preferred to warn the student without publicly singling him or her out, often using a group alert, such as clearing the throat and looking in the direction of the student. If that did not work, she spoke directly to the student. The training strategies were also used to motivate students, to train them to practice self-control skills and citizenship skills, and to teach the art of independent learning.

Appendix B indicates that Mrs. Fisher's basic correcting strategy for extinguishing undesirable behavior was to have students write their names on the board (sign-ins) after they had failed to heed a few warnings (training strategies). Like the training strategies, the correcting strategies also served a variety of purposes. They were used to determine consequences for repeated and more serious offenses; to determine each student's conduct grade; to establish contact between parent and child and among teacher, parent, and child; and to involve parents in the training and correcting process. Mrs. Fisher recommended a collaborative approach between the teacher and the parent (Gordon 1974), but only after it became evident that the student was unable to accept responsibility for making behavioral changes (e.g., Dreikurs 1968; Glasser 1969). She reported that she rarely involved the principal in disciplinary matters, except in exceptional cases when students were injured.

"Off-the-board strategies" were reserved for cases in which the student had either ceased taking sign-ins seriously or had a "bad habit," such as an "untrained" student who continued to "disrupt" and perform "below level [of ability]." The teacher's basic strategy was to solicit the cooperation of the parents and then stop every expression of the behavior that had been targeted, such as "blurting out." Students were placed under considerable pressure to change their behavior and tended to become aware of the consequences of their behavior, primarily because Mrs. Fisher made it more rewarding

to control the behavior than to express it. In one case I observed, within a 2-week period the targeted behavior was extinguished to the extent that the student was completing his work. Eventually he was able to join a higher-level reading group as a result of his newly acquired skills in self-control and work-study habits. Cone (1978) also found that elementary teachers selected more severe strategies for deviant students and for dealing with more serious, disruptive behaviors. However, Mrs. Fisher reported that she did not use off-the-board strategies for all personalities. She guided one student, described as "sneaky in a calculating way," with a lighter touch. Mrs. Fisher avoided using open confrontation tactics because she believed they might worsen the problem. Buckley (1977) reports observing a similar practice by a fourth-grade teacher who applied management strategies differentially to students identified as nonconforming and resistant to teacher influence.

Mrs. Fisher's routine treatment of various expressions of tattling was different from her reaction to other off-task behaviors, probably because the student approached the teacher. Strategies to extinguish tattling included the use of hand motions, "go away," glaring looks, raising the voice, and making suggestions to the student such as "Why don't you take care of yourself?" The literature offers no insight into how other teachers deal with tattling, but it seems reasonable to assume that improper handling of tattling could detract from positive group dynamics and waste time.

#### *The group alert*

Group problems were handled like individual problems, at least initially. If a number of students were off task during seatwork, Mrs. Fisher selected a group alert. For example, she might say, "Those aren't work sounds I'm hearing." If the talking did not cease totally, she might say, "I still hear talking." Most often these

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group alerts were observed at the beginning of the reading period and were designed to alert the group to the fact that they needed to be aware of what they were doing (or not doing) and correct misbehavior before Mrs. Fisher focused on individual offenders. If a particular group alert did not have the desired effect, a class meeting would be held, the problem would be discussed, and a new signal would be worked out by group consensus. (For the same reason, Mrs. Fisher frequently varied types of rewards and seatwork assignments. However, I observed no changes in the consequences until May, when the classroom rules were relaxed.)

#### *Continuing the search for criteria*

At this point, the criteria category was still incomplete. The question that finally elicited information about two other criteria was, "Do you usually make exceptions for any of your students?" Trust between researcher and informant was suddenly at stake, but after hesitating, Mrs. Fisher quickly produced a list of students and various conditions affecting the way she treated them. I conducted a series of focused interviews and observations to compare Mrs. Fisher's verbal reports with her selection of strategies during reading.

The results showed that Mrs. Fisher considered "the personality" of the student to be her most important management criterion. She used the personality characteristics of students to set management objectives for each individual. Students often had either "boisterous" or "shy" personalities, and they were too boisterous or too shy to the extent that these characteristics affected their "level of participation" in classroom activities. Her objective was to get them "on target," that is, enable them to monitor their own behavior and "make decisions that are appropriate" so they can "fully participate." Shy students might need encouragement in expressing themselves; therefore, Mrs. Fisher sometimes refrained from correct-

ing them unless they were really disrupting the class or being sneaky. On the other hand, boisterous students often needed guidance in learning how to listen and become more aware of others' needs. Their behavior tended to escalate and become disruptive, so Mrs. Fisher was likely to correct boisterous students who got "too loud." During reading, Mrs. Fisher preferred to group students according to their personalities to give shy students a chance to express themselves and avoid being dominated by more talkative students. However, because of ability differences she was not always able to do this. No correlation between ethnicity and personality was noticed, but there was a tendency for boys to be labeled boisterous more often than girls.

The student's "level of development" was another important criterion that Mrs. Fisher used. Over the years she had generated a number of developmental characteristics that helped her determine the amount of training a student required. A student's level of development could range from requiring almost constant supervision, which she termed a "low level of development," to requiring only a small amount of supervision, termed a "high level of development." A student at a high level of development understood and practiced self-control skills in most settings. "Tell them once or twice and they understand," the teacher explained. The student at midpoint may require slightly more training. "[He] . . . learns [the rules] after three or four explanations." Students at a low level of development must be monitored closely during seatwork. "It's going to take 10 to 100 repetitions before they learn it," Mrs. Fisher asserted. She explained that students at a low level of development received more training and were given the benefit of the doubt after their motives and intentions were considered. At the same time, because they understood better and acted with more intentionality, high-level students received less training and were



corrected more quickly. These students were most often in the top reading group, whereas low-level students were more often assigned to the lowest reading group and consequently needed more frequent encouragement to maintain positive attitudes toward learning to read. The teacher believed that they did not need the extra burden of being punished for not being able to remember class rules. No correlation was found between ethnicity or sex and the level of development.

Interestingly enough, in January, I observed off-the-board strategies applied to a new student, an Anglo boy, who was assigned to the lowest reading group. He was almost totally unaware of his behavior and had no concept of how to please the teacher. For a while Mrs. Fisher made life difficult for him until he started to look at her before making a move. She would then signal approval or disapproval. She described this teaching-learning process as "raising the student's level of development." The student became more interested in learning to read and stopped acting so impulsively. However, he was never able to join the middle reading group and was eventually retained.

Two additional criteria were identified. They included whether the student's behavior was repeated and whether the student was improving. Mrs. Fisher considered behaviors that were repeated more serious than similar behaviors that occurred infrequently. During the course of the day, the teacher usually gave about two warnings (training strategies) to any student before she selected correcting strategies. However, there were variations to this routine. Shy and low-development students usually received several warnings, especially if the teacher perceived that they were making some effort to remember the rules; a student at a high level who was loud and disruptive might receive only one warning. At the same time, students who argued with the teacher were told immediately to put their names on the board.

Improving students who regressed momentarily might receive a mild reminder or simply might be ignored.

It became clear that the teacher believed the quality and quantity of each student's participation in classroom activities were functions of type of personality and level of development—as seen in and affecting the extent of supervision and training needed. The teacher set objectives for each student and selected preventing, training, and correcting strategies according to her evaluation of a student's characteristics. A conduct chart posted in the room provided a systematic means by which the teacher encouraged and counseled students and maintained a written record of their progress.

#### *Refining selection routines*

To test the fit between criteria and strategies, 20 vignettes were formulated based on actual situations observed in the classroom. The vignettes varied according to Mrs. Fisher's categories of off-task behaviors. The teacher was asked to respond to the vignettes and elaborate on any criteria she considered when selecting a strategy. For each vignette, additional questions, such as the following, were asked: "What if the student had a boisterous [shy] personality?" "What if the student were at a high [low, middle] level of development?" In this way, the components of the various criteria were explained by the way they interacted with the off-task situations.

Figure 1 summarizes the criteria and illustrates that intentionality and disruptiveness are related to several factors. Disruptiveness cannot be determined until one knows what type of behavior is occurring. Intentionality is determined routinely by the type of behavior (the more disruptive, the more intentional), level of development (the higher the level, the more intentional), and the degree of repetition (the more often repeated, the more intentional).

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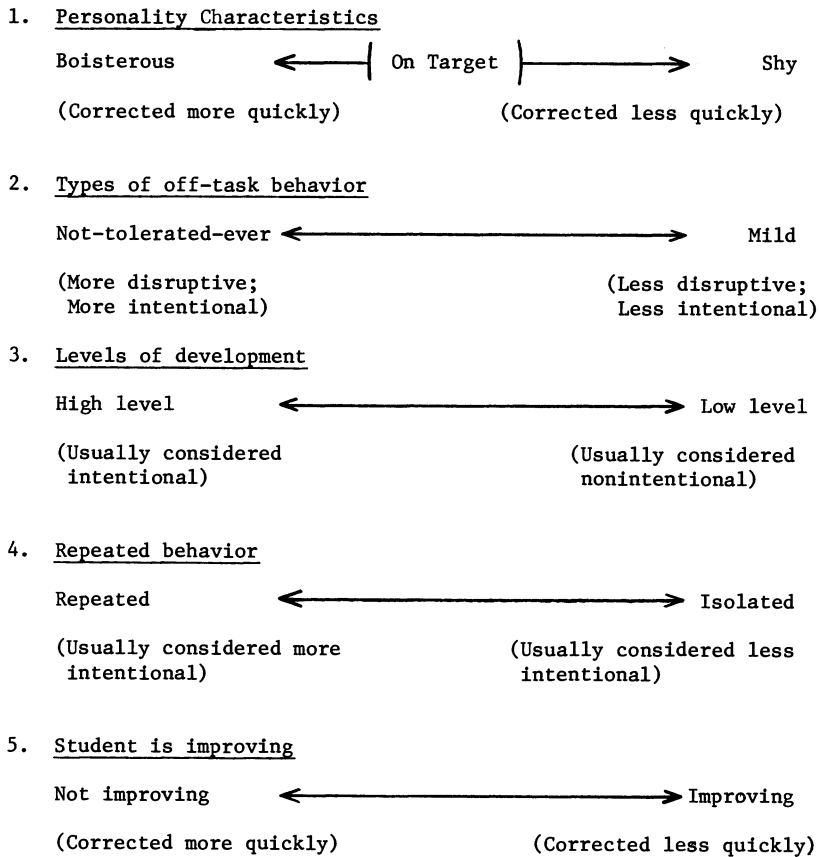


FIG. 1.—Criteria that influence the selection of management routines

### ***Modeling routine strategy selections***

To model the routine strategy selections that expressed Mrs. Fisher's management plan, it is necessary to focus first on student off-task behavior that appeared routinely during reading seatwork activities. At the next level of contrast, the number of warnings a student received and other student characteristics, such as personality and level of development, are considered. For example, figure 2 shows that the first logical question is, "What is the behavior?" If the answer is, "Argues with the teacher," the model predicts the teacher will immediately select a correcting strategy (routine 2).

Appendix C expresses the information-processing model with 12 strategy selection routines that the teacher uses during

reading. Included as routine 1 is Mrs. Fisher's group alert strategy.

### ***Implementing the selection routines***

To illustrate how the strategy selection process works, several examples are taken from observation notes and traced through the model.

Mrs. Fisher is instructing a small group in the reading center when Eduardo, who is engaged in seatwork, calls out from across the room. "Mrs. Fisher, I've already done this!" "Huh, sir!" Mrs. Fisher says. "Do you know rule 2? Sign in." Eduardo sits and looks at her, not moving. Mrs. Fisher motions towards the chalkboard. Eduardo very slowly goes up to write his name on the board and then turns in his Good Citizenship badge at the teacher's desk. It will be a week

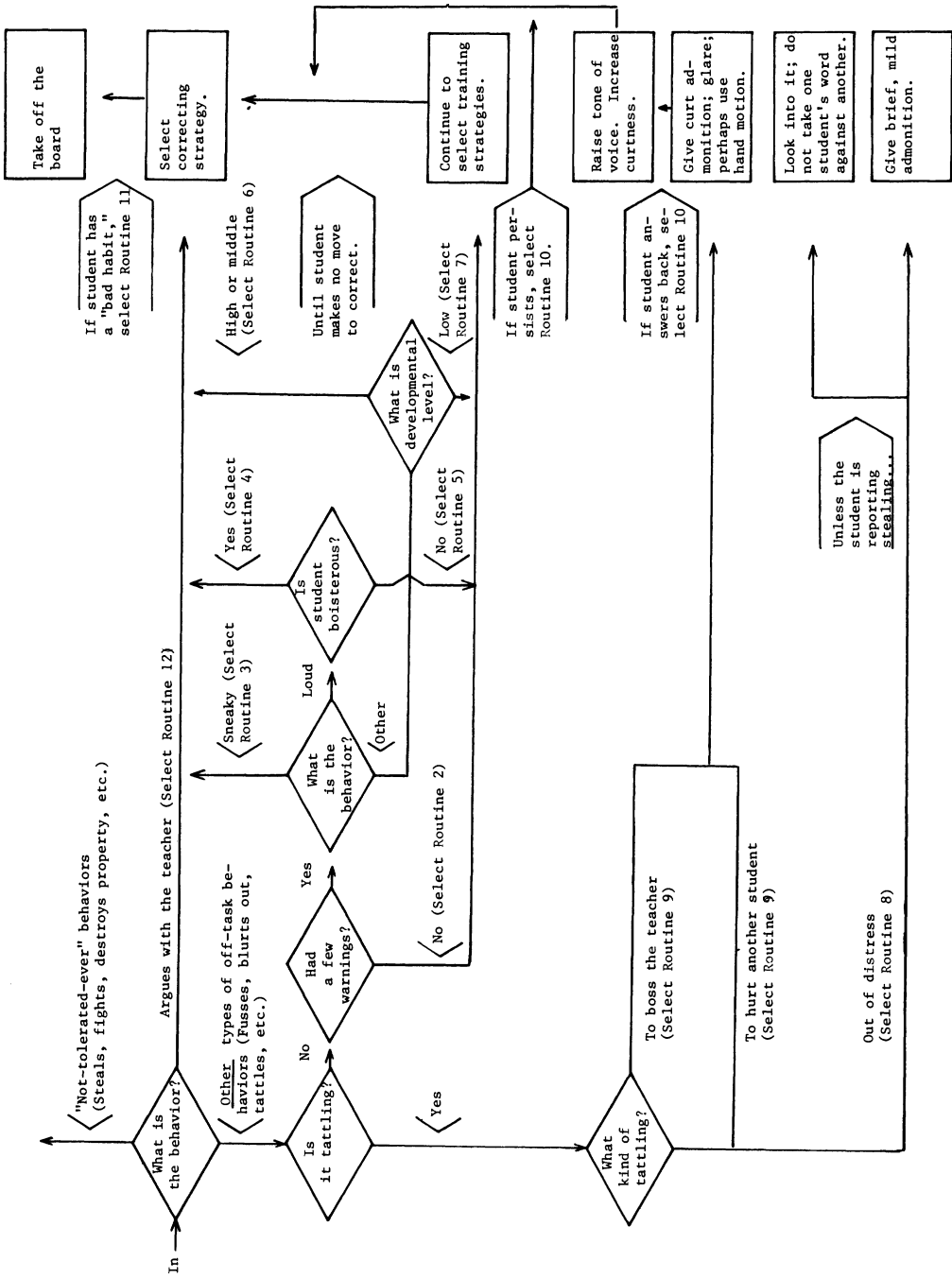


FIG. 2.—Information-processing model of the teacher's management plan

before there is an opportunity to earn it back.

About 20 minutes later, another student, Tim, gets up from his desk, comes part way to the reading center, and calls out, "Mrs. Fisher!" Mrs. Fisher responds, "Oops! You know rule 2." She looks at Tim, and Tim stops, looks at her, and then turns around to go back to his desk.

Both students "blurt out" and do not speak softly, which violates a classroom rule. The teacher tells one to put his name on the board, while she simply reminds the other of the rule. To understand what is happening, we need to know that Eduardo has already been warned once for off-task behavior. Moreover, he has a boisterous personality and is at a high level of development. Mrs. Fisher's selection process for this situation can be traced through the model as follows: What is the behavior? It belongs to the *other* category but is not tattling. Has the student had a few warnings? Yes, the student has had one. What is the behavior? Loud and disruptive. Is the student boisterous? Yes, therefore, the model accurately predicts that Mrs. Fisher will select a correcting strategy.

The teacher identifies Tim as being untrained, boisterous, and at a low level of development. (Unlike Eduardo, who is one of the best readers in the class, Tim is in the lowest reading group.) The selection routine starts with the *other* behaviors that are not tattling. Has the student had a few warnings? No, this is the student's first warning. The model correctly predicts that Mrs. Fisher will select a training strategy.

#### *Testing the plan with new data*

In late September of the following school term, Mrs. Fisher participated in another series of observations and interviews so that I could study her management plan for the beginning of the school year. Based on her previous explanations, I predicted that if errors occurred in the model, they would result from the selection of a training strategy when the selec-

tion of a correcting strategy should have been expected. (A prediction error was defined as a selection that is observed but not expected, whereas an accurate prediction is both expected and observed [see Geoghegan 1973].)

At the initial interview, which was conducted to determine the seating chart and the reading groups, Mrs. Fisher surprised me with a list of students, criteria (test scores) used to assign them to the three reading groups, and comments on the students' behavior. The comments included familiar terms such as "shy," "aggressive," and "discipline (problem)." We used the list to discuss the students' characteristics in detail and why they had been assigned to each group. I then returned the next day to observe and practice identifying the students. (The ability level and ethnic makeup of the class were similar to the previous year's with the ethnic minorities evenly distributed across the three reading groups.)

During the testing period, which occurred over a period of 3 days during the first 2 weeks of October, 74 selection routines were observed. Table 2 shows that 68 selections were both observed and expected, producing a prediction rate of 92%. As expected, the errors resulted from changes in the teacher's selection routines in order to emphasize training. For example, there were 38 selections of routine 2, a training strategy, but only four selections of correcting strategies. These findings support those of Emmer, Evertson, and Anderson (1980), which indicate that effective classroom managers spend a large amount of time in the fall instructing students in classroom rules and procedures, thus clarifying expectations for appropriate student behaviors.

Only seven group alerts occurred early in the year—a finding that surprised me. Mrs. Fisher indicated that the group had learned the classroom rules quickly and attributed this to a new strategy. During the first week of school, all the students had

TABLE 2. Number of Selections of Management Routines Expected and Observed during Four Reading Sessions

	Strategies Observed											Total Expected	
	1	2	3	4	5	6	7	8	9	10	11		
1. Group alert	7												7
2. A few warnings		32											32
3. Sneakiness			0										0
4. Boisterous and loud		5*		2									7
5. Shy and loud					0								0
6. High or middle level		1*				1							2
7. Low level and off task							6						6
8. Distress tattle								3					3
9. Tattle to hurt									0				0
10. Persists in tattle										0			0
11. Off the board											17		17
Total observed	7	38	0	2	0	1	6	3	0	0	17		74

NOTE.— $N = 74$  for all items.

\*Selections expected but not observed, resulting prediction rate of 92%.

been given Good Citizenship badges without having to earn them. (The previous year some had never earned badges.) However, they had to turn in their badges if they received a correction (name on the board). This strategy appeared to work in that it tended to put all students on the alert. I noticed that the atmosphere of the classroom was like that of the previous year—friendly and relaxed yet business-like.

Although Mrs. Fisher often signaled the targeted behavior, during the testing of the model I did not always observe the behavior that drew her attention. Each of my questions was resolved by asking the teacher for an explanation during a break in the activities. At other times, questions arose after a student had received a second warning. On six occasions the teacher gave additional warnings to students she later identified as being at a low level of development and not disruptive. These selections were then listed as meeting the criteria for routine 7. Another student was identified as a discipline problem with poor

self-control. He received two extra warnings (training strategies), but Mrs. Fisher later revealed that he was “off the board.” The discipline and poor self-control selections were then counted as selections of routine 11. Although the teacher reported that the student’s behavior was not out of the ordinary, there was some indication that this student was acting with keen awareness of my presence in the classroom. Twenty-three percent of the 74 selections involved this student, even though he was absent during one of the morning sessions. This is probably somewhat due to his being off the board; however, Campbell (1982) notes that boys tend to become more antisocial in the presence of a stranger such as an adult investigator. To correct for such a phenomenon, investigators could plan for an “adaptation” period in the classroom, not relying totally on the teacher’s assessment.

Ninety percent of the students received one or more management selections, with students at a low level of development drawing 42 training strategies and two cor-

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rections (59% of total selections). Students at the middle level received 14 training strategies and no corrections (19%), whereas students at the high level drew only 7 training strategies and 2 corrections (12%). However, though the teacher warned the students at a low level of development six times more often, they received the same number of corrections as the high-level students. This finding confirms Mrs. Fisher's stated policy of refraining from correcting the slower students and allowing them more freedom of movement. Brophy and Rohrkemper (1981) and MacKay and Marland (1978) report somewhat similar teacher behaviors. Teachers, especially primary-level teachers, tend to compensate for students who try but cannot learn, students who are shy and introverted, and students who have special circumstances such as family problems. (No patterns related to ethnicity or sex were discovered.)

### **Summary and conclusion**

The teacher we studied had a management plan that was highly routine but capable of generating alternative courses of action. She usually formulated a course of action by selecting from among 12 routines that were derived from the interaction of management objectives, strategies, and selection criteria she had developed over years of classroom experience. Based on data collected during a new school term, the selection routines—expressed in an information processing model—were verified during reading seatwork time at a prediction rate of 92%.

The teacher's management goal of encouraging student participation in classroom activities promoted her instructional goal of helping students to be willing and independent readers. The teacher conceptualized the management goal as a series of hierarchically arranged objectives that were proactive in nature. First, she believed in establishing a sense of belonging to the group, a highly affective stage dur-

ing which warm, lasting relationships among the students and between teacher and student were encouraged. At the same time she taught self-control skills, but she believed that the success of this stage was directly related to the existence of a sense of belonging and desire to please the teacher. She saw the third stage as the development of various work-study skills such as work completion and concentration. To move the students through the stages as efficiently as possible, the teacher preferred first to teach the whole class, then smaller groups as needed, and finally individuals. She used training and correcting strategies for the large group as well as individuals. The same management strategies served more than one purpose, sometimes fostering a positive socioemotional climate and at other times modifying student behavior. They were a simple yet effective means of achieving the teacher's goals and objectives.

The goals and objectives provided a rationale for the differential treatment of students based on their personalities and levels of development. The policy's result was more structure and stringently applied consequences for capable students and more freedom of movement and fewer consequences for the less capable. The teacher monitored students' attitudes and behavior and evaluated the effectiveness of her efforts with each student on a daily basis by means of a conduct chart.

Recent literature on classroom management reports effective management is characterized by strategies that prevent misbehavior (e.g., Emmer et al. 1980; Evertson & Emmer 1982; Good & Brophy 1978). The present findings support that position and indicate that it is possible for a teacher to use clearly defined and integrated goals to establish a plan of preventive management by which students learn how to participate appropriately in the learning process. An effective management plan advocates that desired student behaviors be identified, taught, and eval-

uated using much the same process by which instructional concepts are taught.

A consistent finding in the teacher planning research is that objectives are seldom the starting point for teachers when they plan instruction (Brophy 1980; Clark & Yinger 1980; Shavelson & Stern 1981), and at least one study indicates that teachers do not spontaneously mention objectives when planning aloud for an interviewer (Morine-Dershimer 1979). The results of the present study and two other case studies recently completed using the same methodology (Pittman 1984) show that teachers do not openly discuss management objectives until they trust the interviewer and until "why" questions can be asked and answered with openness. Even so, teachers seldom label objectives as such, frequently expressing objectives in terms of cultural beliefs and theories about child development and learning. Only after the teachers' management objectives were discovered through systematic questioning techniques did it become clear that the objectives provided the rationale or starting point for even the most routine selections of management strategies.

Indications are that effective classroom managers develop ranked categories of recurring student behaviors and formulate preferentially ordered strategies progressing from mild reminders to more severe corrections for repeated offenses. The ranking of student behaviors from mild offenses to very serious behaviors is related logically to the ordering of the strategies, while both, in turn, are related logically to the teacher's goals and objectives. Management goals are integrated with instructional goals to provide the essential rationale for promoting student involvement in classroom activities and minimizing student behaviors that interfere with the teaching-learning process.

Mrs. Fisher's notions of students' personalities, intentionality, and levels of development indicate that knowledge of child development and skill in applying that

knowledge to groups and individuals play a part in the development of an effective management plan. Classroom teachers may be utilizing child development information not currently found in teacher training textbooks. Future research must examine classroom teachers' knowledge in this area and determine how teachers apply their knowledge to planning and problem solving in the classroom. Also, more information is needed about how expert teachers implement their management plans across grade levels and how those plans are related to instruction and teachers' theories about learning.

In conclusion, it appears that cognitive ethnography provides a method for understanding how teachers practice at least one aspect of their craft—management of students engaged in reading seatwork. It is too early to generalize the method's effectiveness to other classroom contexts, but the idea of naturalistic research joined with methods of quantification holds promise.

### *Appendix A*

#### *The teacher's groupings of off-task behaviors*

"Not tolerated ever"

1. Steals major item, such as \$5.00
2. Hurts someone intentionally physically
3. Intentionally destroys property
4. Intentionally uses bad or foul language

"Very serious"

5. Argues with the teacher
6. Fusses loudly with another student
7. Acts boisterously, such as blurts out
8. Tattles to manipulate the teacher
9. Tattles to hurt someone
10. Fails to respond to a group directive
11. Steals a minor item, such as a pencil

"Serious" to "minor"

12. Goes into out-of-bounds situations, such as joining another reading group watching a filmstrip

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13. Gets noisy during a tutoring session
14. Sneaks
15. Talks nonschool talk, but not very loudly
16. Wanders around the room haphazardly
17. Is off task but not disruptive, such as daydreaming

### **Appendix B**

#### ***Preferentially ordered teacher strategies***

##### “Training strategies”:

1. Monitor
2. Omit taking action
3. Cause student to correct own behavior without singling out
  - a. Catch eye of the student, or
  - b. Give a group alert, or
  - c. Make a movement to catch the student’s attention
4. Cause student to correct behavior by singling out
  - a. Call name, then identify tasks, or
  - b. Tell to stop, or
  - c. Redirect, or
  - d. Counsel

##### “Correcting strategies”:

5. First sign-in: B grade in conduct for that day
6. Second time: C grade in conduct; may take time out
7. Third time: D grade in conduct, and student writes letter home to parents; letter is to be signed by the parent and returned.
8. Fourth sign-in: F grade in conduct for that day

### **Appendix C**

#### ***A partial list of the teacher’s selection routines***

1. If a group problem exists, continue to select a group alert until the group gets on task.

For other behaviors, not including tattling:

2. If a student is off task and has not received a few warnings, select a training strategy.
3. If a student has had a few warnings and is acting sneaky, select a correcting strategy.
4. If the student has had a few warnings, is being loud and potentially disruptive, select a correcting strategy.
5. If the student has had a few warnings, has a shy personality, and is being loud for a change, select a training strategy, which may be to omit taking any action.
6. If the student has had a few warnings, is off task but is not being sneaky or loud, and is at a high or middle level of development, select a correcting strategy.
7. If the student has had a few warnings, is off task but is not being sneaky or loud, and is at a low level of development, continue to select training strategies until the student makes no effort to change the behavior. In that case, select a correcting strategy.

For tattling:

8. If the student tattles out of distress, such as complaining about another student, give a brief, mild admonition, unless the student is reporting stealing, cheating, fighting, or illness. In this case, look into it further, but do not take one student’s word against another.
9. If the student tattles to hurt another student or to manipulate the teacher, give a curt admonition, glare with the eyes, and perhaps use a hand motion to make the student go away.
10. If the student answers back, raise tone of voice and increase curttness.

If student persists, select correcting strategy.

For bad habits and arguing with the teacher:

11. If the student needs to correct a bad habit, take note of all targeted behaviors.
12. If student argues with the teacher, select a correcting strategy.

#### Notes

The author is indebted to Robert A. Randall, professor of anthropology at the University of Houston, for his assistance and direction in conducting the study, and to James E. Anderson, Barbara R. Foorman, and Jerome H. Freiberg, professors of education, for their invaluable comments and suggestions. Appreciation is also due to the teacher described in the study for her essential role as informant and for her critique of the first summary of the data. Entry into the school district was provided through the Teacher Corps Project, University of Houston, Dr. J. H. Freiberg, director.

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