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Continuing motivation in elementary school children: A naturalistic case study

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The Ohio State University, 1992
CONTINUING MOTIVATION IN ELEMENTARY SCHOOL CHILDREN:
A NATURALISTIC CASE STUDY

DISSERTATION

Presented in Partial Fulfillment of the Requirement for
the Degree Doctor of Philosophy in the Graduate
School of the Ohio State University

By

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1992

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To My Mommy

Evelyn Hoffman
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CHAPTER I

PURPOSE AND CONCEPTUAL BASE OF THE STUDY

Frame of Reference

Concern about how well children are learning in school is usually directed toward such things as their grasp of facts, concepts, study skills, and reasoning skills; the quality of their papers, oral presentations, and projects; their reading comprehension; and their test scores. The research presented here concerns a relatively neglected criterion that implies a conception of learning that is broader than can be accurately assessed by performance alone. That criterion is the willingness of children to invest their time, talent, and energy in their work. It is commonly known as motivation.

To the layman, motivation is seen as a general kind of force, perhaps a combination of factors, that determines whether and how a person will do something. It would seem to arise at the threshold of one's action or inaction. One dictionary definition states that to motivate is "to stimulate the active interest...through appeal to associated interests or by special devices" (Webster's Third New, 1961, p. 1475).
In another, one sense of motivation is simply "inducement" (Random House Dictionary, 1973, p. 934). These definitions imply that motivation is something that one person does to another.

In the Third Handbook of Research on Teaching, Wittrock (1986) refers to motivation as "the process of initiating, sustaining, and directing activity" (p. 304), which might seem to imply action of teacher upon student. However, he continues by discussing the thought processes by which motivation arises from within oneself. Atkinson's Expectancy-Value Theory characterizes motivation in more technical terms as a multiplicative interaction of aroused motives, perceived probability of success, and valuing of the act (McClelland, 1985). Keller (1983) contrasts it to ability: "Motivation refers, in a general way, to what a person will do, whereas ability refers to what a person can do" (p. 388). Clearly, these latter two definitions do not address motivation from the viewpoint that something is imposed but rather that something is self-constructed by the person who experiences it, which is the perspective taken in this study.

"The assumption all too often has been made that if the instruction is of good quality, motivation will take care of itself" (Keller, 1983, p. 388). Studies have found, however, that circumstances that enhance achievement may contribute to a degrading of motivation. Mossholder (1980), for instance, found that college students who did an interesting task with a
construction kit were less persistent or interested when given a goal to reach, even though their performance increased. Pre-school children who expected a reward for drawing pictures drew more but of lower quality and returned to the task less afterward than peers who expected no reward (Greene and Lepper, 1974). College students who knew they were to be evaluated surpassed an unevaluated group at the technical aspects of an art task but later expressed less interest than the others (Amabile, 1979). (For discussions and further examples of circumstances that tend to degrade motivation, see Deci and Ryan [1985], Keller [1983], and the Lepper and Greene [1978a] volume.)

Motivation has long been a matter of interest, and over the years there have been efforts to understand its constituents, their dynamics, and how to apply them beneficially in educational as well as commercial realms. There is today a growing recognition of the importance of student motivation. In the area of research, there has been a relatively large number of presentations dealing with the subject at conferences of the American Educational Research Association over the past several years and increased participation in the association's Special Interest Group on Motivation. Policy makers at the national level have been showing increased concern recently. For instance, during his tenure as assistant U.S. Secretary of Education, Christopher Cross asked that proposals for each of the federally
sponsored research centers focus on student motivation (Rothman, 1990, p. 12).

Among the researchers who have been investigating motivation and its constituents is Martin Maehr. Maehr (1984) observed that students demonstrate personal investment in their schoolwork by several different behaviors: (1) the choices students make among options; (2) the intensity with which they work in spite of potential distractions; (3) the persistence they show when interrupted; (4) the quality of their performance; and (5) voluntary re-engagement in their work. This last form of personal investment was named continuing motivation by Maehr (1976), who recognized that students sometimes have "the tendency to return to and continue working on tasks away from the instructional context in which they were initially confronted" (p. 443). The focus of this study is continuing motivation. The study examines one elementary classroom and its children in order to learn what kinds of schoolwork they return to on their own and why.

He noted that the phenomenon of continuing motivation (CM) may be a subset of intrinsic motivation, particularly when the latter is defined as Deci (1975) has done, as the satisfaction of a need for competence and self-determination. Maehr (1976) emphasized that unlike intrinsic motivation, which was most often studied and applied in the domain of psychology, the primary importance of CM is as an educational outcome. However, the
notion of Intrinsic motivation at school was eventually dealt with at some length by Deci and his colleagues (e.g., Deci & Ryan, 1985; Ryan, Connell, & Deci, 1985; Deci, Ryan, & Connell, 1988).

Basic Assumptions

When a study is to be conducted in the light of a paradigm that is variously referred to as naturalistic (Lincoln & Guba, 1985), qualitative (Bogdan & Biklen, 1982), interpretive (Bredo & Feinberg, 1982), or phenomenological (McCutcheon, 1981), methodologists advise that the assumptions made by the researcher are relevant to the conduct of the study. It is, therefore, essential that the researcher: (a) be aware of those assumptions; and (b) state them. Accordingly, before proceeding to lay out the theoretical and conceptual framework of this study, I will state assumptions that have been important to its inception and direction.

So as not to confuse my assumptions with other kinds of truth claims, it has been instructive to use the system proposed by Ford (1975) in her allegorical work, *Paradigms and Fairy Tales*. She proposed the following four classes of truth claims and respective designations: belief claims (Truth 1), preference claims (truth 2), analytic claims (truth 3), and empirical claims (truth 4). (I will refer to them as T1, T2, T3, and T4.) The next section will deal with belief claims (T1) in general and those of my own. It
will be followed by a section listing my preference claims (T2) and then providing some substantiation for them by way of empirical (T4) and analytic (T3) claims. According to Ford's scheme, empirical and analytical claims are, respectively, judgments that are interpreted by the researcher to be in agreement with systematic observation of reality and judgments that are logically deduced. Chapters Four and Five will set forth the empirical (T4) and analytical (T3) claims made on the basis of data collected and analyzed in this study.

Belief Claims

One's most basic, metaphysical (i.e., What are the nature and origin of the universe and of being?) assumptions (T1) influence the development of particular interests and the decision to do research about them. It follows that those assumptions would be reflected in the findings--the interpretations--of a study. One's cultural background has a lot to do with those assumptions. Hence, had I grown up in a different culture, the present study, if it were to exist at all, might be quite different. Metaphysical assumptions are not, however, usually delineated in a research study, perhaps because of their complexity or an assumed similarity with those of the audience. If mine are touched upon herein it will be only indirectly, inasmuch as they are somehow reflected by points of self-description included below in the next
Ontological (i.e., What is real?) assumptions (T1) and related epistemological (i.e., What counts as knowledge?) assumptions (T1) are certainly essential to the nature of a research study, including the methods of inquiry (Eisner, 1985). The interpretive epistemology guiding this study deserves some illumination. Beliefs essential to that view of knowledge will be discussed here. Strategies and thought procedures for implementing the investigation according to these beliefs will be discussed in Chapter Three.

In the view of the interpretivist, reality consists of the meanings that persons attach to their experiences (Bogdan & Biklen, 1982). This is not a denial that a particular experience has occurred or that it can be given a name. What the experience evokes, though, is different for each person. Reality is constructed differently by each person; so in any situation where there is more than one person, there is more than one reality (Lincoln & Guba, 1985).

Similarly, interpretivists reject the notion that the stated order of a particular social entity is objectively real—a system of factors external to people. Instead, interpretivists look beneath to find rules of order actually in operation there. An objective reality of a society exists only inasmuch as its members
believe that it is affecting them; if they do not attribute any of their actions or feelings to a system external to them, then there is no such system. Rather, society is a network of meanings people share, because people have common or similar perceptions of their history and of social order (Carr & Kemmis, 1986). These commonalities enable persons to understand each other, despite differences in individual experiences. These commonalities also enable researchers to interpret those understandings.

Meanings and constructs are not valid if imposed by the researcher. The phenomenological researcher must find ways of understanding the meanings of actions from the point of view of the actor (Bogdan & Biklen, 1982). Schutz named the process and product of such understanding Verstehen (Bernstein, 1976). In trying to understand meanings held by the actor, the researcher still has to interpret. Understanding, in the interpretivist view, is interpretation (Bernstein, 1983). While one's interpretation can be enhanced by expanding the information on which it is based, there is no understanding beyond interpretation. Nor can there be a final, unalterable understanding (Smith, 1984), because an inquirer's experiences and thought processes do not cease.

**Preference Claims**

Preference claims (T2) of a researcher are, on the other hand, not to be taken for granted, because they may help the
audience understand why the study has been carried out as it has and why it has been carried out at all. By stating the following preference claims, I am making an effort to express my values or ideals that I believe have been most relevant to the genesis of this study. In the ensuing paragraphs, I briefly substantiate and expand upon some of them.

1. For most children, school is boring much of the time. School should be interesting, stimulating, and meaningful.

2. Children--no matter what their scores on standardized achievement and intelligence tests--would be doing school-related work on their own if school were interesting, stimulating, and meaningful to them.

3. Most young people are capable, given wholesome conditions, of assuming much more responsibility than they do.

4. In our society, children often experience an artificial distinction between work and play. When they grow up apprehending the two as mutually exclusive, they find less meaning and enjoyment in many kinds of activities than they might otherwise experience.
5. For adults, the purpose of a productive occupation is to create goods or provide services that contribute not only to the economic good but to the psychological, moral, and ecological well-being of the person, the community, and the society.

6. A critically important function of school curriculum is to help students to see how schoolwork is or could be relevant to their lives.

7. Ideas and voluntary activities that emerge after the conclusion of required curricular experiences are of the same order of importance as the knowledge and skills that students can demonstrate during the course of those experiences and their formal evaluations.

One of my preference claims (T2) is about productive occupation of adults. There is significance in the difference between "work," in which persons produce something that they value and that is life-sustaining or life-enriching, and "labor" or a "job," in which there is no more than a weak sense of completion or fulfillment of one's own purposes other than to earn income (T3) (Wirth, 1983; Green, 1968). The best kinds of productive occupation are those that provide a sense of having created something that has meaning to oneself beyond its economic instrumentality, fostering a sense of self-determination (as explicated by White, 1959, and Deci, 1980). Much of the business
In which adults are engaged today does not fulfill this criterion (Wirth, 1983). In the industrialized Western world today, most people—blue-collar and white-collar alike—are engaged primarily in labor.

The claim (T2) that young people are generally capable of assuming more responsibility is consonant with the finding (T4) that students need to feel a sense of autonomy if they are to become engaged with, not disaffected from, their schoolwork (Deci, Ryan, & Connell, 1988).

School personnel pressure children toward good performance in a variety of subtle and not-so-subtle ways. It is as if there were no motivation in the children to do well....It seems likely that children would perform better if they were not pressured so much. (Deci & Ryan, 1985, p. 252)

Consistent with the valuing of meaningful work in adulthood is my preference claim (T2) that school should be stimulating for children. That children are routinely bored much of the time in school has been amply documented (T4) by the popular first-person accounts and open classroom literature of the 1960's and early 1970's (e.g., Holt, 1964; Kohl, 1969; Postman & Weingartner, 1969); ethnographies of classroom life (e.g., Jackson, 1968); and the reform reports of the 1980's, such as Goodlad's (1983) which characterized classroom atmosphere as emotionally flat and students as passive and restrained. Theodore R. Sizer, widely recognized recently for his development of school reform projects, has said, "Schools are, by and large, quite boring places....We don't attend to getting kids interested" (Rothman, 1990, p. 12).
These judgments are crucial reasons for pursuing the present research. Students' lack of motivation must be examined in terms not simply of their personal makeup but of the qualities of task and environment (Maehr & Braskamp, 1986).

Eisner (1985) recognized several prevalent and rather distinct conceptions of what constitutes the good in education and society. From those value positions—those conceptions of appropriate ends—certain orientations in regard to curriculum are likely to follow. One such orientation is based on the premise that schools should (T2) enable pupils to have educative experiences that have "personal relevance" or meaning. The values and priorities that give rise to this study are quite consistent with a personal relevance orientation. It stresses that curriculum be built upon the interests that come from children's personal experiences and that children be helped to recognize and explore those interests.

I believe (T2) that activities in which students have found some pertinence to their lives are the activities that they are likely to continue to pursue on their own under no duress to do so. This belief is consistent with the empirical findings (T4) of Maehr and his colleagues. Based on their research, they have theorized that the kind of effort a person will devote to a situation is determined by the meaning it has to the person (Maehr & Braskamp, 1986). Eisner (1985, p. 69) further states that "for
experience to be educational students must have some investment [italics added] in it...." By investment Eisner means that students have had some part in the development of the experience, a notion that relates closely to self-determination (White, 1959; Deci & Ryan, 1985).

My preference claim (T2) that compulsory activities have little value unless they spawn ideas and voluntary activities is roughly equivalent to Maehr's (1976) statement, "It is equally important, if not more so, for the school to foster the continued willingness of students to learn than it is to insure the fact that they have learned some particular things" (p. 444). Maehr and Braskamp (1986) posited three kinds of beneficial outcome of personal investment: achievement, personal growth, and life satisfaction. I have carried out the present research with a belief that the second and especially the third tend to be undervalued in the contemporary process of education. My claim agrees with Dewey's (1938) statement that educators have to "select the kind of present experiences that live fruitfully and creatively in subsequent experiences" (p. 27). While most every educator would also agree with that statement, it is doubtful that the instructional activities of many would indicate that it is given nearly so high a priority as students' performance.
Personal Experience as Impetus for Research

As a child, I lived in a home environment that featured, among other things, carpentry tools in the basement, a yard to dig in, quiz shows on television, and a mother who appreciated my sense of humor. Going through elementary and secondary school, I had teachers who provided and assigned a broad array of experiences in the academic subjects and the arts, some of which were very inviting to me and gave me ideas. Also at school, I was introduced to friends with sensibilities similar to mine.

I often started projects based on the things I saw going on around me. When construction workers were digging along the highway to put in a pipeline, I tried to make one by laying milk cartons end to end. When I saw wheels of fortune at a carnival and in an early television quiz program, I tried to build one with wood and nails. In second grade, for a short time, we had a store where you could buy toys with play money. That activity and the experience of shopping in an old flea market had a lot to do with my organizing, some five years later, a neighborhood porch sale, the proceeds of which allowed me to buy the electric sander I had learned about in shop class. In art class, we were assigned to make floor plans of our homes. After doing that, my friend—the son of an architect—and I designed an entire school. In English class, I could not understand the significance of A Tale of Two Cities, but another friend and I wrote a satire of it. There were
numerous other instances. Many were important experiences in my life, part of the essence of my enjoyment of childhood. Many were self-affirming and growing experiences, teaching me about what seems to work and what doesn't. It is with poignant memories of my own CM that I set out to investigate it in others.

The Need for This Study

Foci of research in CM. Research in CM has evolved from studies on the effects of reward on intrinsic and extrinsic motivation. (See, for instance, Deci & Ryan, 1985.) Studies of CM have been done in connection with efforts to do such things as: improve instructional design (e.g., Dodge, 1986; Lopez & Sullivan, 1990; Rieber, 1990); promote helping and altruistic behavior (Kicanas, 1981); retain volunteers (Trabert, 1986); increase students' internal attributions of academic success and failure (Noss, 1979); and compare the results of encouraging students to work separately or together (Allen, 1979; Clinkenbeard, 1989; Frank, 1979). Factors for which effects on CM have been investigated include various aspects of tasks and instructional environments, personal and demographic characteristics of participants, and levels of performance by participants.

Restrictions in definition of CM. Maehr (1976; 1984; Sorensen & Maehr, 1976) proposed a number of examples of what he meant by CM. It was evident to him that children experiencing CM
In an activity were "turned on" by the activity; and he speculated that CM might be promoted by freedom of choice in one’s schoolwork. His work implies a valuing of both of those conditions.

Maehr (1976) also proposed several methods for measuring CM and called for efforts to utilize and refine them. Subsequent studies have, by and large, attempted to apply those measurement methods to compare the apparent effects of various conditions upon CM. To do so, researchers devised operational definitions of CM. The precision of those definitions facilitated measurement.

Studies using various operational definitions of CM have yielded interesting findings. However, it appears that significant freedom of choice has been difficult to build into research designs, and the sense of being turned on has been difficult to capture. The investigations have, generally, been done in circumscribed settings, particularly: (a) laboratory situations in which a single activity was presented, and a very limited number of options was available afterward; and (b) classroom situations in which the consequences of a single activity were observed, but little attention was paid to contextual factors. In devising precise operational definitions, researchers have severely restricted the types of activities to be continued, the amount of time between a required activity and its resumption, and the nature of the continued version of the
activity. The subsections to follow introduce these aspects of CM that have not, for the most part, been questioned by the studies and which therefore warrant investigation.

**Type of activity.** Student activities from which resumption has been observed include printed word puzzles, activities with scientific apparatus, science projects, drawing, test-like questions, and others. While some of those tasks have academic qualities, many are contrived and not indicative of typical academic activities.

Blumenfeld, Mergendoller, and Swarthout (1987) explained how academic tasks of similar content can vary widely from each other because of differences in their form—i.e., objectives, procedures, social organization, required products, and kind of evaluation. These authors described, further, how the form of an academic task may present to the learner very different cognitive requirements from those of the task’s content. Similarly, it seems that when students are motivated to resume a task on their own, it may be either the task’s form, content, or both which promote the resumption. It is unclear what role the form, the content, or both interacting may play in motivating a resumption.

**Interval before resumption.** In a number of studies, students undertook assigned activities and could return to them only when given explicit opportunities to do so. The interval between cessation of an activity and opportunity for resumption ranged
from less than an hour, to a day, to a week. The length of time in which a motivated student might be expected to return to an activity has not been discussed. Conceivably, a child might return to an activity only after a period of weeks or even years.

Nature of resumption. The kinds of resumption that have been studied have tended to be continuations or repetitions of the original activities. Yet, there would seem to be merit in a child’s engaging in an extension, an imitation, a variation, or something that is otherwise reminiscent of the original activity. Indeed, Dewey (1938) held that an experience is educative if it leads the student to subsequently engage in experiences that elaborate upon it. Nevertheless, there have been few studies of CM in which elaborations on the initial activity are considered.

Conceivably, the task’s form, content, or both may get re-entered. While it would seem that the resumption of involvement in content would be a desired result of an academic task, there may also be value in the resumption of a task form (e.g., creating a newsletter, creating a mural). More needs to be said about the importance of schoolwork evoking in students a continuing motivation to engage in activities related to (a) the content or (b) the form of the work.

The research problem. The restrictions in the definitions of CM noted here limit the applicability of the research in which they appear. To form a clearer picture of the range of behavior
patterns that comprise CM and to get a sense of what it feels like to students, there is a need to find and document examples of it in natural, unmanipulated settings. That, concisely, is the problem taken on in this research.

Overview of Design and Methodology

The design and methodology of the present study address the limitations noted above. The design is naturalistic, born of the paradigm of interpretive, phenomenological inquiry. Using naturalistic observation as its main approach, the study set out to locate instances of CM in natural school and home settings, where children's freedom to choose was not limited or manipulated by the researcher. The plan was to learn about CM by getting to know the members of a classroom, what they do, and why they do it. To accomplish this learning with a sufficient degree of confidence, it was necessary to observe over an extended period the goings-on in the classroom and to talk freely with its participants about their actions and beliefs. The study was open to a wide variety of directed school activities, intervals between engagements, and resumed versions. The histories and purposes of children's actions were considered, as well as the behaviors themselves. The study is an effort to elaborate the construct (Glaser & Strauss, 1967) of CM.
In his thoughts about assessment, Maehr (1976) noted that there are "many interesting possibilities" for naturalistic observation of children returning to tasks in open-choice situations in the classroom (p. 449). He suggested following up classroom tasks with observations on the playground and at home. "Interviews with parents or an ethnography of the extraschool behavior of children relevant to indentifying CM are clearly in order" (p. 450). The present study takes his suggestions of naturalistic observation in the classroom and elsewhere at school and interviews with parents.

This is a case study. A case is an instance: a member of a class of bounded systems (Merriam, 1988). A bounded system can be a program, event, process, or institution; it can also be a person or a social group. A case study is an examination of an instance chosen from the set of instances. At the outset of this study, what precisely would constitute the case or cases and what they would be cases of was unclear. Consideration was given to forming a case study of an individual pupil or a multiple case study of several pupils. As the research progressed, it became clear that in order to capture many varieties of CM, a bounded system of appropriate breadth to study would be the entire classroom, including its pupils, their backgrounds, and the teaching-learning environment. Hence, this is a case study of a classroom.
A number of complementary methods were used to collect data in a way that would facilitate triangulation, thus helping confirm and disconfirm interpretations. Those methods were participant observation, interviewing, reading of personal journals, reading of student records, and videotaping.

A tentative sequence and schedule of data collection methods were planned in advance. Daily observations would begin the very first day of the school year. The researcher would be known to the students as both helper and observer. Broad in their scope initially, observations would gradually become more focused on particular persons, times, activities, and locations that seemed to have the greatest potential for yielding relevant data. Consultation with the teachers would take place on an informal basis before, during, or after daily observations, with formal meetings arranged as needed. Interviewing would commence before Christmas, and observations would decrease, to be replaced in part by the study of pupils' daily journal entries. Data analysis would be concurrent with continued data collection. By mid-year, observations would be infrequent, student interviews well underway, and emphasis placed on returning to the literature. Parent interviews for background information about pupils would be done in March and April. At that same time, several class sessions would be videotaped. This sequence was essentially followed, with modifications to the expected dates and durations.
of each phase. In addition, other methods of data collection that had been considered tentatively at the beginning were used.

The design and methodology of this study, including a consideration of criteria for trustworthy data collection, will be discussed in detail in Chapter Three.

Significance of the Research Setting

The research site is a public alternative elementary school in a large city in Ohio. The specific population studied is a team-taught class of fifty-three third, fourth, and fifth graders in a double room. This is clearly not a typical school or classroom. However, the purpose of choosing this site was not to point out a typical quantity or variety of continuing motivation; it was, rather, to have a good chance of encountering continuing motivation at all.

As an alternative school, part of its population comes by choice, on the basis of a lottery, from other areas of the city. Thus, it probably attracts parents who have relatively strong concern for their children's education. Also, it offers some uncommon curricular and instructional features that some parents find particularly attractive, such as an emphasis on international studies, a whole language program, and team teaching. Despite these special features, the school and the class studied are
heterogeneous in terms of pupil achievement and background. The local and lottery students comprise a fairly equal balance of caucasian and minority students from a range of socioeconomic backgrounds.

Children throughout the school and in this class in particular are generally given frequent opportunities to make choices about the topics they will pursue and the ways to pursue them. The classroom was selected on the expectation that children who are encouraged to make significant choices about their work might be more likely than other children to invest themselves in that work on a continuing basis. This presumption reflects the personal relevance orientation described by Eisner (1985), integral to which is the belief that "intellectual experience [is not likely to be] internalized unless students participate in the formulation of their goals" (p. 72) and unless the school provides "opportunities that are of particular importance to the individual child" (p. 70). At this site, the emphasis that the principal and teachers place on student self-determination is consonant with the researcher's bias in favor of continuing motivation.

CM occurs in students of all ages. A likely advantage of studying secondary pupils is that they are relatively mobile and thus able to pursue the complexities that their voluntary projects might involve. Despite this consideration, an elementary school was chosen mainly because the children remain basically together
in the same location all day, making it easier to focus unobtrusively on individuals without having to follow them obviously from class to class. Older elementary students were chosen with the expectation that the breadth of subject matter in those grades would yield resumptions in an interesting variety of topics. Children of those ages are, according to developmental theory, entering the period of sexual latency, "when the mastery of school subjects and other accomplishments claim so large a share of time and energy" (White, 1959, p. 328). My positive past experiences as a teacher of that age group and my rapport with them also influenced the decision that would determine where I would be spending the better part of a year.

Purposes of the Study

This study is, first, an acknowledgement of the importance of continuing motivation to the lives of young people. Second, by elaborating the construct, the study is intended to be a step toward a shared interpretation of it, consistent with the spirit of Maehr’s (1976) conceptual definition. Such agreement could enable researchers to choose for study those aspects of children’s experience that reflect more truly the real-life features of CM. Third, it seeks to point out desirable, recognizable childhood behaviors other than those of required achievement, and the feelings and histories that may accompany them. By doing so it
might provide for educators a perspective through which to approach the problem of making schoolwork (i.e., the curriculum) more interesting and meaningful to students (i.e., related to their lives), especially those students who are becoming disaffected. As McCutcheon (1981) has said, interpretations made in qualitative inquiry yield understanding that may lead other researchers to alter how they view and conceive of a situation and thereby change the kinds of questions they feel should be posed. "Interpretation can also serve to exemplify and illuminate theory or point to inadequacies in theory" (p. 6). The same can apply to practice.

Research Questions

The research questions that have guided the collection of data are these:

1. In what ways do these students in this class manifest continuing motivation?
   1.a. What subjects, topics, and forms are resumed?
   1.b. What are the time intervals between original tasks and their resumptions?
   1.c. In what respects do resumptions differ from original tasks?

2. Why do these students take their schoolwork further when it is no longer required?
   2.a. What qualities of their tasks and their instructional environment contribute to the presence of personal investment, particularly continuing motivation, in the students?
   2.a.1. In what ways are these qualities important?
2.b. What past and current personal experiences contribute to the presence of personal investment, particularly continuing motivation, in the students?

2.b.1. In what ways are these experiences important?

Limitations of the Study

The point of this study is neither to prove that CM is desirable nor to show how CM can be made to occur. How to do so may be determined through later research. The purpose of this study is to describe occurrences of CM and the circumstances under which it occurs. While there are many legitimate aspects of person and environment on which such a study could focus, it is not possible to consider them all. There would be merit in learning more about factors that other studies have examined, such as those noted above in the section entitled The Need for This Study and in the review of empirical literature in Chapter Three. But to do so is outside the objectives of this study.

The scope of this study reflects the limitations of a single investigator with minimal financial resources. There was, on the other hand, no financial sponsor to whom the researcher was beholden in regard to aims, procedures, or expected results. Still, there was no other investigator to interpret data or challenge its trustworthiness. Efforts to counteract that weakness included the use of member checking with participants.
during data collection and after analysis and the recruitment of
co-observers for limited stints. A full account of measures taken
to ensure trustworthiness appears in Chapter Three.

I have not explored whether the bases of this study or its
findings might be useful to persons whose value priorities differ
substantially from my own. The study does not address in any
formal way the question of what schoolwork might be best in terms
of the value dimension of social maintenance versus social change
(Eisner, 1985). The absence of that kind of discussion is not
meant to imply, as it does so often in research, an acceptance of
mainstream or social values. An adequate discussion of that sort
would be lengthy and complex, so it is not taken up here.

If ethnography be defined as inferring and drawing "a picture
of the 'way of life' of some identifiable group of people"
(Wolcott, 1988, p. 188), then this study is not an ethnography.
Illumination of a school or classroom or home culture is not the
primary aim of the research. A better characterization is that
the study "borrow[s] ethnographic techniques" (p. 201), such as
participant observation and interviewing. But its kinship with
ethnography lies more in the study's heavy reliance upon the
cultural context to help interpret/understand the particular kinds
of actions of interest (Wolcott, 1988).
Organization of the Dissertation

Chapter Two consists of three parts: (1) an explanation of the theoretical base of this study, i.e., Maehr's Theory of Personal Investment and Deci's concept of intrinsic motivation from his Cognitive Evaluation Theory; (2) an examination of Maehr's definition of continuing motivation; and (3) a review of the literature on CM. Chapter Three begins with an explanation of epistemological assumptions underlying the research, then describes the research design, data analysis procedures, and provisions for trustworthiness.

Chapter Four portrays the classroom that served as the case study and the school in which it is situated. In this chapter, the children's schoolwork and the continuing motivation that followed upon it are described. The chapter also deals with personal incentives evoked by the incentives inherent in classroom tasks and events. Merriam (1988) explains that description can comprise any of three levels, depending on the degree of inference inherent in it. At the lowest, simplest level, description is mostly chronological. At the second level, description is purposefully illustrative of particular notions; phenomena are described in terms of concepts. Chapter Four begins with a chronological, first-level account, then goes on to view the classroom in a second-level way that emphasizes the occurrence of CM.
At the third and highest level of scholarly inference, writes Merriam, illustrations are organized in terms of the overarching theoretical framework. Chapter Five employs this level of inference to examine the congruence of the provisions of Maehr's and Deci's theories with characteristics of the classroom and the pupils' statements and actions. The chapter deals with opportunities for personal investment, incentives in the environment, and wellsprings of CM from times and places other than the present classroom.

Chapter Six, the final chapter, reviews interpretations that have been presented earlier, notes elaborations upon Maehr's theory that can be derived from those interpretations, and discusses implications for possible future curricular/instructional practice and for further research.
CHAPTER II

LITERATURE REVIEW:

TOWARD A CONCEPTUAL UNDERSTANDING OF CONTINUING MOTIVATION

Theoretical Bases of Personal Investment

The purpose of this chapter is to establish a clear understanding of the concept of continuing motivation (CM) to guide the collection and analysis of data. The main source of that understanding is the work of Martin Maehr and his colleagues, relevant portions of which are explained in the first part of the chapter. Maehr and others who have written about motivation have often referred in their work to the research and theorizing of Edward Deci and his colleagues. Fundamental to Deci's Cognitive Evaluation Theory is his construct of intrinsic motivation and its attributes. Where that construct further illuminates Maehr's notion of meaning, Deci's work is cited here. The second part of the chapter examines Maehr's definition of CM in detail, examples of CM, and its relationship to learning. The third part of the chapter reviews empirical studies of CM.
Maehr's Theory

The domain of Maehr's Theory of Personal Investment is illustrated in the Table 1. The diagram reflects a melding of two explications of the theory, one referring primarily to children in school (Maehr, 1984) and one published slightly later with minor revisions and a more general focus, meant to include the workplace (Maehr & Braskamp, 1985).

Table 1

The Elements of Maehr's Theory of Personal Investment

<table>
<thead>
<tr>
<th>Conditions Antecedent to Meaning</th>
<th>Components of Meaning</th>
<th>Behaviors That Manifest Personal Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal experiences</td>
<td>Sense of self</td>
<td>Choice</td>
</tr>
<tr>
<td>Sociocultural context</td>
<td>Action possibilities</td>
<td>Intensity</td>
</tr>
<tr>
<td>Teaching-learning situation</td>
<td>Personal incentives</td>
<td>Persistence</td>
</tr>
<tr>
<td>Information</td>
<td></td>
<td>Quality</td>
</tr>
<tr>
<td>Age/stage</td>
<td></td>
<td>Continuing motivation</td>
</tr>
</tbody>
</table>
When children invest their time, talent, and energy in an activity, what is usually observable is one of the behavior characteristics listed in the figure. Choice is a matter of what activity is done. Intensity refers to how strongly or wholeheartedly it is done. Persistence means reluctance to leave it until completion or closure. Quality is, of course, how well it is done. CM is a special instance of choice in that it refers to re-selection after closure has occurred. It could perhaps just as well be called resumption of investment, or resumed investment.

Personal Investment in Terms of Meaning

Maehr (1984) theorized that whether students will invest their personal resources in an activity depends mainly upon the relevance, the significance—the meaning—they perceive in it. In Maehr’s conception, meaning is more than interpretation of something experienced. Meaning is, in his words, “an enduring characteristic acquired through previous learning and experience that tends to exhibit itself in the present” (p. 135). Meanings carried from the past combine with present experience to form the "meanings of the moment" (Maehr & Braskamp, 1986, p. 49). Meaning is dynamic in that one’s present inexorably becomes part of one’s past experience.

He developed a model of "meaning" that in contrast to the rather vague, everyday use of the term posits specific components and sources. According to that model, the meaning students
perceive in an activity depends upon whether and how it: (1) incorporates goals to which they are already disposed; (2) maintains or enhances their self-concept; and (3) raises possibilities for actions (things to do, talk about, think about—all are investments) that are plausible within the students' social and cultural surroundings (family, peers, school, etc.). These three components are, according to Maehr (1984), important features of most theories of motivation. He emphasized that the three facets are interrelated: they overlap and do not operate independently of each other.

**Antecedents of Meaning**

When an activity is proposed to or thought up by a student, the meaning he/she attaches to the prospect of engaging in it is derived from various sources (Maehr, 1984). (Although Maehr tends to use the term "acquired" rather than "constructed," clearly his theorizing assumes that meaning is internal to each individual and is built from each one's interpretation of social experiences.) Those sources are summarized here.

One source is **personal experiences**. What people are reminded of from their past affects their perception of the present. Because a residue of people's past experiences tends to stay with them, the meanings constructed from new experiences tend to incorporate those of the past.
What a person takes to be good or bad or important in the things he/she sees, hears, and does are influenced by its **sociocultural context**. One's past experiences have been defined in part by the social structure and cultural milieu of the neighborhood, religious and ethnic group, and nationality in which they happened. In the same way, expectations based on social relationships and cultural practices in the present contribute directly to the meaning of a current school activity and to the feasibility and sensibility of the various options for carrying the activity further.

The **teaching-learning situation** is a third antecedent of meaning. Inasmuch as the classroom and school are themselves social systems with cultural traditions, they constitute a layer of the sociocultural context from which pupils infer expectations and demands. Maehr refers to the **social expectations** of the situation. Distinct from the context but not entirely separable from it is the configuration or design of the tasks pupils are required and allowed to do. The configuration of a task can be described in terms of such things as: familiarity and complexity of procedures; degree of freedom to vary the product; and criteria, standards, and rigor of performance appraisal. Pupils' perception of a task in each of these dimensions contributes to their construction of its meaning. Maehr's notion of **task design** is similar to that of **task form** discussed by Blumenfeld, Mergendoller, and Swarthout (1987).
Another factor in determining meaning is what Maehr has called information. The kind of information he refers to is that which connects work to likely or possible future outcomes, thus giving it a purpose or rationale. Information, in Maehr’s sense, reaches pupils through informal (e.g., television) as well as formal channels (e.g., instruction), outside of school as well as inside (Maehr, 1984).

Finally, meaning is influenced by one’s age and maturational stage. Physical, mental, and emotional development affect how a child perceives and relates to persons and events.

Components of Meaning

Maehr (1984; Maehr & Braskamp, 1986) proposed that the meaning a student perceives in a material, a text, an activity, or any experience contemplated or in progress is a function of three interrelated components: sense of self, action possibilities, and personal incentives. They are described in this section as they are understood in Maehr’s theory. References to pertinent work of Deci supplement the description.

Sense of self. Sense of self is a complex of perceptions, beliefs, and feelings about who one is. One aspect of sense of self is self-identity. People adopt the social norms of the groups with whom they identify. Those values affect what they feel is worth striving for and how striving should occur. The
extent to which students feel that an activity is appropriate depends in part upon whether it conflicts with the expectations of any of their reference groups, be it friends, family, religion, or some other (Maehr & Braskamp, 1986).

A second facet of the sense of self is goal-directedness, or the tendency of looking toward the future, planning for what is desired, and perhaps delaying gratification to attain it (Maehr & Braskamp, 1986). Some children always seem to be planning, building, or working on something that will result in a culminating event or product.

A third aspect of the sense of self is self-reliance, the feeling of control or lack of control over one's destiny (Maehr & Braskamp, 1986). Deci (1980; Deci & Ryan, 1985) describes what is essentially the same quality, calling it self-determination. This quality has been investigated extensively under the rubric of the constructs locus of control and locus of causality.

A fourth property of a sense of self in Maehr's theory is sense of competence, a person's beliefs about how well he/she can do something. Students who believe they are competent at a task or kind of task are attracted to it as a way of self-enhancement, or feeling better about themselves; those who have doubts about their competence at it are more likely to avoid testing themselves at it (Maehr & Braskamp, 1986). Deci, too, sees sense of competence as an essential quality of self. This kind of
Self-judgment is very similar to the construct self-efficacy developed by Bandura (1977, 1981). Self-efficacy is said to spring from four sources: one's accomplishments, vicarious experiences, verbal persuasion, and emotional arousal.

**Action possibilities.** The meaning of a situation is, in part, what it suggests for you to do. Situations evoke or imply various things that can be done and that seem appropriate to do. The options people perceive as both (a) available and (b) acceptable (or plausible) in a situation are referred to as action possibilities (Maehr, 1984; Maehr & Braskamp, 1986). A possible action has plausibility if a student is aware of it, believes there is an opportunity—time, materials, support—to do it, feels competent enough, considers it sufficiently worthwhile to do, and senses a satisfactory likelihood of envisioned outcomes. The actions a student feels able to take when confronted with a task depend greatly on his/her sense of competence at each of those actions. The actions a student feels are appropriate to the task are very dependent on the self-identity he/she has derived through identifying with reference groups. In these ways, perceptions of action possibilities are intertwined with one's sense of self.

**Personal incentives.** Personal incentives refer to latent knowledge of qualities in the environment that one perceives as attractive and unattractive and that thus influence what one does. The knowledge may be latent but can become conscious if elicited
by questioning (Maehr & Braskamp, 1986). They are internal to the individual but learned rather than inborn.

The use of the word incentives calls attention to the importance of situational variations that may occasion motivational change; the use of the qualifier personal stresses our view that it is the person's apprehension of the situation that is critical. (Maehr & Braskamp, 1986, p. 50)

They refer to direction of activity, not to level of performance. They differ from goals, which tend to be conscious (Maehr, 1984).

A construct in Deci's work that is essentially identical to the personal incentive is the motive. A motive consists of interests and competencies toward which one's directs one's energy (Deci & Ryan, 1985). Some direct quotes are edifying. "A motive is a cognitive representation of some desired future state" (Deci, 1980, p. 20). It is "an awareness of a need" in oneself and of "potential satisfaction" of it (Deci & Ryan, 1985, p. 231). It is an "awareness of potential satisfaction" (Deci & Porac, 1978, p. 168). "Motives...provide the basis for goal selection and behavior" (Deci & Ryan, 1985, p. 234).

People's diverse experiences give rise to personal incentives that can be categorized in different ways. Maehr (1984; Maehr & Braskamp, 1986) distinguished four categories of personal incentives. Through research with adults, the authors conceived two varieties, or objects, of personal incentive in each category. Conceivably, somewhat different varieties could be distinguished in children. In considering a particular task, a person may
experience one or more of the various incentives. In Deci and Ryan's (1985) words, "Often behaviors are selected in an attempt to satisfy several motives at once" (p. 234).

The four categories of personal incentives and the included varieties are described briefly:

1. **Task personal incentives** emanate from an attraction to the task itself for qualities intrinsic to it that one finds interesting to experience. Task personal incentives also refer to those arising from delight in the competence to be gained from working at the task. Under task personal incentives, Maehr and Braskamp specify task involvement and striving for excellence. The first is the sheer excitement, fun, adventure, or novelty through which one may lose oneself in the "flow" (Csikszentmihalyi, 1975) of an activity. (Maehr and Braskamp note that task involvement is commonly called intrinsic motivation. As explained later in this chapter, however, intrinsic motivation will in this study denote something somewhat different, as conceptualized by Deci.) The second heading connotes pride in the quality of one's work, self-competition, and self-improvement.

2. **Ego personal incentives** arise from attention to a socially recognized standard and the prospect of reaching or surpassing it, which usually involves doing better than someone else. The varieties of ego personal incentives are power and competition. Power refers to leadership, authority, and freedom
from control by others. The incentive to compete connotes the importance of winning. It is unclear whether Maehr considers competition with oneself to be a function of task or ego or both.

3. Social personal incentives reflect the good feelings inherent in interpersonal relationships. Their object is to gain the friendship, support, or approval of others. They are manifest in actions that demonstrate good intentions or effort or being a good boy or good girl. The varieties of social personal incentives are affiliation and social concern. The former is an attraction to opportunities for friendship, affection, and trust. The latter values commitment to worthy causes and personal sacrifice for the well-being of others.

4. Neither of the foregoing two categories of personal incentives is quenched by qualities inherent in a task itself. Many researchers would therefore consider such incentives to be extrinsic to the task (Deci & Porac, 1978). But in neither category does the person seek to receive something in recompense for doing the task. In contrast, extrinsic personal incentives are motives satisfied by a prize that is not part of the performance of the task. Something is given to the person. The varieties or objects of extrinsic personal incentives named are financial or other tangible reward and recognition. The former is obvious; the latter implies that one does well when encouraged by peers or authority figures, and one strives for their respect and
good words, especially publicly compliments. A reward may have a symbolic value, as well, that affects (a) one's status in the group and thus satisfies a social personal incentive or (b) one's knowledge of how well one has done and thus satisfies a task personal incentive.

Sometimes the reward or recognition to be given is not part of the person's reason for doing the task. Research on the role of extrinsic rewards has found that under many conditions they degrade intrinsic interest, i.e., task personal incentives (Lepper & Green, 1978a; Deci & Ryan, 1985).

Maehr's is but one categorization that has been found useful in studying people's motivation. Unless operationally defined, it would appear that his categories are overlapping, not entirely mutually exclusive. Maehr and Braskamp (1986) say nothing to suggest that any person might be incapable of feeling particular kinds of personal incentives, but they emphasize that one's culture tends to influence the relative salience of incentives.

Deci's Theory

An understanding of personal investment is greatly enhanced by an understanding of the concepts advanced by Deci, which are themselves based on the work of Robert White. White's widely cited paper of 1959 catalogued inconsistencies in theories that had attempted to explain the source of motivation—in other words,
why human beings experience motivation. He assembled the findings of researchers from a diverse set of psychological disciplines to form a new foundation for much of the subsequent motivation research.

It was and still is generally agreed that various human drives enable the person to exist by providing energy with which he/she carries out the most basic bodily and intellectual functions. This energizing is motivation, in the broad sense of the term. Primary drives are satisfied--temporarily reduced--by such things as food, water, and sexual activity (Deci, 1975). The motivation on which White and Deci have concentrated and which is referred to in this paper is motivation energized by sources other than these basic drives.

Competence. White (1959) posited that there is a particular kind of energy in the person which prompts behavior aiming toward effective interaction with the environment. In other words there is a fundamental human need for competence. Competence serves to ensure one's well-being (Deci & Ryan, 1985). A great deal of competence results purely from maturation (White, 1959). But much competence is gained through processes such as exploration, attention, thought, and play, all of which have been energized, or motivated, by the need for competence (White, 1959; Deci & Ryan, 1985).
To differentiate the need or urge for competence from competence in the sense of something achieved, White (1959) referred to the need for competence as *effectance*. In most contexts, the terms are quite interchangeable, though. Deci's terms, *effectance motivation* and *competence motivation*, are essentially synonymous with effectance. Dealing with one's environment effectively promotes a particular kind of satisfaction that White (1959) called a feeling of *efficacy*.

*Self-determination.* White (1959) alluded to a need closely related to effectance: the need to have one's actions determined by one's own choices rather than by reinforcement contingencies or other forces. The fulfillment of that need results in a feeling of autonomy or *self-determination*. Different people have different needs for and capacities for self-determination. Those needs and capacities vary from one domain to another and from one time to another (Deci, 1980).

Self-determination is also the process of using one's will--one's capacity to make choices about how to satisfy one's needs. It includes "utilizing the capacity to choose, and enlisting the support of various forces to satisfy one's needs" but also "accepting one's boundaries and limitations, recognizing the forces operating on one" (Deci, 1980, p. 26). Whether external conditions provide options or not, a person is self-determined when acting flexibly, using available information
for choosing among options and accommodating when there are none. Based in part on the work of Lefcourt on locus of control, Deci (1980) holds that people need to believe that they have freedom to determine their own actions. Behavior occurring under pressure is not self-determined, even if desired outcomes are achieved. Only intentional behaviors the consequences of which are perceived as being under one’s own control (i.e., with internal perceived locus of causality) are self-determined (Deci & Ryan, 1985).

Intrinsic motivation. Drawing upon the importance of competence and self-determination, Deci developed a conception of intrinsic and extrinsic motivation that is different from the conventional notions of them. In the common understanding, when an activity is done for the reward inherent in it, the motivation is intrinsic (intrinsic to the activity, that is). When an activity is done to obtain a reward that is separate from the activity, the motivation is said to be extrinsic (to the activity). These interpretations are widely used as bases for operational definitions in research on motivation (Deci & Porac, 1978; Deci & Ryan, 1985) and provide a distinction that theorists and practitioners in psychology and education can clearly understand and refer to.

The essence of Deci and Ryan’s (1985) conceptual definition of intrinsic motivation is this:

When people are intrinsically motivated, they experience interest and enjoyment, they feel competent and
self-determining, they perceive the locus of causality for their behavior to be internal and in some instances they experience flow. The antithesis of interest and flow is pressure and tension. (p. 34)

In regard to the common conception of intrinsic motivation, they caution: "Like all operational definitions it is not perfectly correlated with the psychological definition, so it requires the use of some perspective in its application." When applying the operational criterion by looking for the presence or absence of any apparent external reward, "one would properly look deeper to understand the processes rather than naively infer intrinsic motivation" (p. 34). They suggest looking for quality of performance and other characteristics that research has found to be indicative of competence and self-determination: creativity, flexibility, and spontaneity. They also recommend asking participants whether they have experienced enjoyment, as well as competence and autonomy.

The presence of incongruity (discrepancy, gap) between one's internal structures (representations) and the external world is important. Optimal incongruity implies optimal challenge (Deci & Ryan 1985). Competence and self-determination experienced from an activity do not result in intrinsic motivation unless the activity is optimally challenging (Deci & Ryan 1985). Conversely, optimal challenge and a sense of competence do no result in intrinsic motivation if there is not a sense of self-determination.
Intrinsic motivation, the pursuit of competence and self-determination, involves seeking optimal incongruity, reducing it, and seeking more. Intrinsic motivation in adult or child is a persistent, ongoing need to reduce incongruities—i.e., to master challenges—and find new ones (Deci & Ryan, 1985). When their undertakings become repetitious and less interesting, people tend to move on to new ones. In Piagetian terms, children are intrinsically motivated to engage in activities that to a moderate degree they can assimilate into their cognitive structure (representation of reality) and to which they must also moderately accommodate (Deci, 1980). "The reward for competency-motivated behavior is the inherent feeling of competence that results from effective functioning, yet the motivation is such that the feelings seem to result only when there is some continual stretching of one's capacities" (Deci & Ryan, 1985, p. 27).

Factors affecting feelings of competence and self-determination. The nature of an event's influence upon one's motivation—i.e., its functional significance—depends upon conditions in the environment and within the person who experiences the event. It is theorized that an event can have one of three motivational functions (Ryan, Connell, and Deci, 1985):

- **Informational events** are those that are experienced as providing effectance-relevant feedback in the context of choice or autonomy. **Controlling events** are those that are perceived primarily as pressure to perform, think, or feel in particular ways. **Amotivating events** are those that are experienced as being absent of effectance-relevant information such that neither competence nor personal
causality can be established. ... [Thus,] it is not events per se that affect intrinsic motivation [i.e., foster an effectance-related desire to act or invest], but rather their meaning or functional significance for the individual. (p. 18).

Because sense of competence and self-determination in Dei's theory are also integral to Maehr's theory as described earlier, Maehr's is well able to accommodate this notion of the informational and controlling functions of events. Thus, CM, which can be characterized as an effectance-related desire to continue, is affected by the functional significance of events in the child's environment.

The relationship of feedback to the intrinsic motivation a child initially derives from a situation is one of mutual shaping and is not simple. Hence, contrary to popular wisdom, positive feedback from the teacher is apt to degrade intrinsic motivation rather than enhance it when a child perceives the teaching-learning situation as controlling (Dei & Ryan, 1985). Conversely, negative feedback is unlikely to harm intrinsic motivation when a child feels self-determined and competent, i.e., the situation is taken as informational. A child's initial perception of the situation as controlling or informational would seem, however, to depend upon meaning-relevant cues that might not be directly related to the task at hand. Recall that Bandura (1977, 1981) has stated that efficacy expectations are picked up by way of past participation, vicarious participation through
other people, advice from others, and by gauging one's own state of emotional stress or excitement.

Some of the elements of the teaching-learning situation that pupils may interpret as informational or controlling include their perception of deadlines, surveillance, choice, how limits are expressed, positive and negative feedback, task difficulty, expression of concern by the teacher as to limits, responsiveness of the teacher, and basis (or contingency) of extrinsic rewards. The effect of each of these things is mediated by its perceived salience (Ryan, Connell, & Deci, 1985). A predominance of informational or controlling events at home or at school can create a generally intrinsic or extrinsic "context" (Deci & Ryan, 1985) or "atmosphere" (Condry, 1978). This factor could reflect an orientation toward autonomy or control assumed by teachers or parents and the clarity of the standards they set (Deci & Ryan, 1985). Intrapersonal influences on perception of information and control include affects such as interest, enjoyment, pressure, tension, guilt, shame, hostility, and self-consciousness (Ryan, Connell, & Deci, 1985).

Intrinsic motivation in child development. The developmental function of intrinsic motivation is to energize behaviors that promote: (a) assimilation of the elements distinguished in one's environment and in one's thoughts and feelings (i.e., one's intrapersonal environment) into one's understandings (i.e.,
cognitive structures, representations); and (b) accommodation of one's understandings to elements one has distinguished. Deci and Ryan (1985) consider this a natural developmental process which they call organismic integration into a unified sense of self. An environment that fosters intrinsic motivation, they say, facilitates development, and vice versa.

[On their own], children self-regulate the optimal level of challenge....Children tend to engage in non-optimal activities only through the provision of external pressure. Organized environments, such as schools, often use external pressures rather than optimal challenges to motivate children to learn. (p. 124)

Untimely interference and direction by adults can be a disturbing influence on a child's developing mastery....[In that they] are likely to take children away from the tasks that are optimally challenging and thus necessary for natural development. (p. 125)

Extrinsic reward is part of the process of socialization. For extrinsically motivated behaviors, the major developmental issue is the degree to which the regulation they provide becomes internalized and integrated into the self. For extrinsic motivation to become internalized, it must support feelings of competence and self-determination (Deci & Ryan, 1985). Condry (1978) sums up the idea: "The issue is not whether rewards should be used, but how and for what purpose" (p. 184).

Pointing to work of White, Piaget, and Erikson, Deci (1980) concludes that the first three years of life are most crucial for a child's development of self-determination, of trusting one's autonomy; the phases of life from approximately four to six and
from seven to twelve are most important for development of efficacy, of feelings of competence.

So far, the chapter has provided an overview of Maehr's Theory of Personal Investment and relevant aspects of Deci's Cognitive Evaluation Theory, showing that significant features of the two are complementary. Connections between Maehr's theory and other portions of Deci's work may be possible but are beyond the scope of the present investigation.

Interpreting a Definition of Continuing Motivation

The purpose of this part of the study is to review the meaning of the construct "continuing motivation" in the words of its originator and to set forth and justify an interpretation of it that will undergird the research questions and serve as a basis for the collection of data.

Conditions of Maehr's Definition

The concise, introductory definition of CM by Maehr (1976) noted in Chapter One of this study is: "the tendency to return to and continue working on tasks away from the instructional context in which they were initially confronted" (p. 443). For research purposes, a more precise definition proposed by Maehr (1976) is
that CM is "(1) a return to a task (or task area) at a subsequent time, (2) in similar or varying circumstances, (3) without visible external pressure to do so, (4) and when other behavior alternatives are available [italics added]" (p. 448). Some clarification of this definition is necessary:

(1) "Task area" could mean the physical location in which the task was performed or the realm of related subject matter. The former would seem to unduly limit the construct. Since later in the article the terminology "specific task or interest area" (p. 459) is used, task area would seem to refer to related subject matter.

(2) "Under similar or varying circumstances" implies that circumstances could be very different or very similar but not the same as those of the original task. They could be inside or outside the classroom. What might comprise "circumstances," however, would depend upon one's focus or upon what one considers to be significant. Changes that accompany the very passage of time make every subsequent moment a different circumstance. The present research seeks to: (a) point out the kinds of circumstances researchers have considered to possibly be significant to the genesis or preclusion of CM; and (b) pay attention to a broad range of circumstances in which a particular group of children do their school tasks or school-related tasks, and consider the significance of those circumstances.
(3) "Without external pressure to do so" is stated more specifically "without any direct or noticeable pressure from school, teacher, or parent" (p. 443). Furthermore, "[the] return is presumably occasioned by a continuing interest in the task" (p. 443). However, pressure that is indirect, subtle, or invisible to the casual observer could be forceful, nonetheless. Its perceived force might differ widely among children. Maehr does not mention here the possibility of internal pressure or its origins. Conceivably, external pressures can be negligible, and the internal pressures can be substantial. Hence, this part of the definition suggests the importance of paying attention to phenomenological differences in how circumstances are perceived and tasks experienced by participants. It is possible to infer from Maehr’s words a presumption that the initial task was done under pressure. Because tasks need not be done under pressure to occasion resumption, this study does not make that presumption.

(4) "When other behavior alternatives are available" presumes that if the task resumed were the only task that could possibly be done at the time it was resumed, it probably would not be voluntary or occasioned by interest. Absence of alternatives implies, on the contrary, that it was done under pressure or simply for diversion.

The present research assumes that field-based findings might suggest revisions to the conditions that comprise a useful
definition of CM. There may, also, be incidents that seem to straddle more than one variety of personal investment, suggesting that CM (and the other kinds of personal investment) be considered as sensitizing concepts rather than definitive concepts (Blumer, 1970). The appropriateness of construing CM as a sensitizing concept is discussed later in this chapter.

The Essence of Continuing Motivation: Learning or Effectance?

Maehr (1976) provides examples of continuing motivation in the following quotation:

Thus the kindergarten child spends the evening reliving and redoing many of the day's events. Nursery rhymes are repeated again, again—and again! The same figures are redrawn and siblings are coerced to "play school." And, occasionally the 10-year-old will check out a book on Indians after a social studies unit, consult the family library about a point raised in a class discussion, or proceed to turn the family kitchen into a chemistry lab—all without any direct or noticeable pressure from school, teacher, or parent. (p. 443)

Sorensen and Maehr (1976) add the following:

Thus, the first grader returns home after a day at school and proceeds to relive the day's events, sometimes to the distress of parents and older siblings. Tales are retold, the art lesson is reincarnated in the living room, and writing sprees place the family's paper supply in jeopardy. On occasion, a parent will even note that their 11-year-old son, though he stoutly maintains his hate for school, nevertheless "spontaneously" builds a terrarium in the backyard after a science unit. (p. 319)

Maehr (1984) enlarges the list of examples:

It is the child who proceeds to use a free moment to do additional problems, or check out an extra book to find out a bit more about insects, or try out a physics experiment in his father's workshop who is thought to be really motivated. (p. 119)
These examples seem consistent with the definitions. However, Maehr makes two statements about CM in the 1976 article that appear to be inconsistent with the definitions. He states, "The student has been 'turned on' to seek out learning and education outside the classroom," and he asserts the importance of the school "foster[ing] the continued willingness of students to learn..." (p. 443).

Is the kindergarten child who relives events of the day consciously seeking educational experiences? Does the young child repeat nursery rhymes in order to learn them or just for the fun of it? Do children draw figures repeatedly for the purpose of learning them or for the pleasure and challenge? Does one entice siblings to play school for the learning one will obtain or for the feeling of success in getting them to do something they have not done before? Whereas Maehr has characterized continuing motivation as "seek[ing] out learning and educational experiences" (1976, p. 443), it would appear that that is not necessarily what these children are looking for. Learning tends to become more deliberate as persons grow to understand how the value of knowing things will be instrumental to their success in school and out. But when they pick up schoolwork on their own, even if learning is gained it is not necessarily sought.

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It would appear that that is not necessarily what these children are looking for. Learning tends to become more deliberate as persons grow to understand how the value of knowing things will be instrumental to their success in school and out. But when they pick up schoolwork on their own, even if learning is gained it is not necessarily sought.

The actions of these children can be explained as manifestations of the human need to experience competence, or effectance—to experience "effective interactions with the environment" (White, 1959). Their need to experience effectance provides them with energy to seek and choose actions that result in feelings of efficacy (Deci, 1980). Two characterizations of the relationship of effectance (effectance motivation, intrinsic motivation) and learning are particularly lucid and worth quoting:

Effectance motivation is broader in its scope than learning, however....[Its] experiential aim is the feeling of competence that results from effective action. Thus, for example, children seem to exercise their newly acquired competencies simply to experience the sense of satisfaction that they provide....The reward for competency-motivated behavior is the inherent feeling of competence that results from effective functioning.... (Deci & Ryan, 1985, p. 27)

White (1959) uses a poignant analogy:

Certainly the playing child is doing things for fun, not because of a desire to improve his competence in dealing with the stern hard world. In order to forestall misunderstanding, it should be pointed out that the usage here is parallel to what we do when we connect sex with its biological goal of reproduction. The sex drive aims for pleasure and gratification, and reproduction is a consequence that is presumably unforeseen by animals and by man at primitive levels of understanding. Effectance motivation similarly aims for the feeling of efficacy, not for the
vitally important learnings that come as its consequence. If we consider the part played by competence motivation in adult human life we can observe the same parallel. Sex may now be completely and purposefully divorced from reproduction but nevertheless pursued for the pleasure it can yield. Similarly, effectance motivation may lead to continuing exploratory interests or active adventures when in fact there is no longer any gain in actual competence or any need for it in terms of survival. In both cases the motive is capable of yielding surplus satisfaction well beyond what is necessary to get the biological work done. (p. 323)

A fifth grader, after learning in class about the telegraph, might (1) ask his parents or read more about the use of Morse code, (2) try to memorize it, and (3) use it to communicate house-to-house with a friend or actually decipher some on a short wave radio. Or, without translating, the child might (4) just feel excited turning the radio dial to hear Morse code from distant locations transmitting at many different pitches and speeds. He would seem to be seeking information about something, in the first instance; trying to become competent at something by practicing it, in the second instance; and then either using the information and/or skill to accomplish something; or just getting caught up in the mystery or awe of it. Whether the aim was to know a little more about a topic that evoked his interest, to create a gizmo that worked, to attract a friend, impress the teacher, or something else, it can be said that in any case the aim was to do successfully a chosen action, with the implicit satisfaction (efficacy) that it brings.

It seems evident from this slight probing of hypothetical examples that while Maehr’s attributing CM to a child’s desire to
educate or train him/herself is true to some extent, the child’s developmental task of searching for efficacy is the more encompassing purpose.

Continuing Motivation Contrasted With "Motivation to Learn"

There is a concept similar to CM in name and origins but supportive of a different premise. Variously called motivation to learn (Marshall, 1987), continuing motivation to learn (Brophy, 1983), and continuing intrinsic motivation to learn (McCombs, 1984), this construct refers to a student’s ability to enjoy assigned work and to carry it out efficiently, acceptance of benefits ascribed to the work (i.e., engage in it for its intrinsic benefits rather than simply to finish it with a passing grade), and willingness to persist at it. Students can, according to the authors, acquire these characteristics through instruction in requisite skills and strategies.

Whereas CM means independent continuation brought on by affective consequences such as self-efficacy and self-determination, motivation to learn emphasizes conscious, cognitive (Brophy, 1983) appreciation and pursuit of the benefits of assigned work. To the extent that pupils feel turned on as a result of that appreciation, motivation to learn may result in CM in Maehr’s sense. The personal incentive of striving for excellence (Maehr & Braskamp, 1986) fits well with the concept of
motivation to learn. Thus, CM and motivation to learn are distinct phenomena but their occurrences could be connected.

Marshall (1987) says:

In contrast to intrinsic and continuing motivation, however, motivation to learn centers on the meaningfulness, value, and benefits of academic tasks to the learner—regardless of whether they are intrinsically interesting. Additionally, with motivation to learn, the value and benefits of the task are seen in terms of the learner's self-development. (p. 136)

Presumably, she means the values are seen by the learner. This is not a characteristic of intrinsic motivation, for while Deci and Ryan (1985) say that it plays a role in human development, they do not hold that the self-development must be apparent to the participant.

The present research places the personal relevance of the curriculum (Eisner, 1985) above all other reasons for schooling. Whatever cognitive changes toward motivation to learn might occur in the student through conditions or interventions recommended by its advocates, motivation to learn will be intrinsic only if the structure promotes personal meaning—i.e., feelings of efficacy and autonomy in a context of reasonable challenge. Training in the requisite skills and strategies has not been portrayed as in any way justifying inflexibility in curricula and instructional environments. However, while McCombs' (1984) study notes that motivational skills training is meant to "change negative attitudes and orientations toward learning" (p. 215), there is no
allusion to the legitimacy of negative attitudes, i.e., that they are adaptive responses. Insofar as the promulgation of motivation to learn concentrates on changing the cognitions and attitudes of students but disregards the personal significance of the meanings they have constructed, the concept appears to imply a social adaptation orientation (Eisner, 1985), in which the general aim is to foster a strong acceptance of the present constitutive rules (Apple, 1975) of the communities to which the child belongs.

Motivation to learn and its attendant skills are certainly desirable curricular outcomes. The premise of the present study does not deny that pupils may respond to academic tasks in self-defeating ways, perhaps for lack of helpful experiences, models, or suggestions. Ability to probe a task's content for its personal relevance requires skill and attitude that might well be taught in class. My point, however, is that to bring about CM we are not limited to "interventions" that attempt to change a person's thinking toward particular tasks or topics. This study is concerned with how children take advantage of the meanings they construct from past experience and present conditions, even without being instructed on the virtues of doing so. As alluded to in Chapter One, the study reflects a strong valuing of young persons' ability to independently derive their own beneficial and satisfying direction.
Defining CM Operationally

The willingness of persons to resume tasks after having performed them under certain conditions has been the topic of numerous studies since the early 1970's. The common paradigm was one of measuring the number of persons who returned to a task after having been rewarded for it versus after doing it without reward. As explained above, this distinction has commonly comprised a convenient operational definition of extrinsic versus intrinsic motivation. There have been systematic reviews of many of these studies (Deci & Ryan, 1985; Lepper & Greene, 1978a; Malouf, 1983). Since Maehr first referred to returning to a task as "continuing motivation" in his seminal article of 1976, the concept has been used as an outcome measure in studies in which the independent variable is a type or degree of reward. It has also, however, been used when independent variables are other than reward. The present review considers empirical studies of resumption that have been published since Maehr's paper and use Maehr's terminology.

This study, as noted in Chapter One, is intended to elaborate the construct of CM—to work toward a common conception of it that would be useful for educators who wish to help students find meaning in schoolwork. In contrast, a primary concern of most studies of CM has been to measure it under different conditions.
Doing so has entailed reducing the conception of CM to an operational definition so that certain variables can be manipulated while others are held constant. The studies have, by and large, been conducted in brief laboratory situations or classrooms in which the everyday course of events has been interrupted rather than examined. Findings obtained in such circumstances provide little basis on which to find similarities (i.e., transferability) to ongoing classrooms (Lincoln & Guba, 1985). Therefore, a compilation of the findings would not contribute to the purpose here. A brief overview of the variables employed will suffice to show what factors researchers have expected to influence the occurrence of CM.

Following that overview, the review is organized in subsections which highlight the studies’ characteristics that imply how CM is conceived—characteristics such as the content and form of the investigated tasks, the kinds of evidence said to indicate a presence or abundance of CM, and the amounts of time in which CM is expected to develop. The bulk of the studies are quantitative, mostly of experimental or quasi-experimental design. They are examined immediately below. After that, the few naturalistic studies and qualitative aspects of the treatment studies are reviewed.

Independent variables employed. Factors that were varied in CM studies relate to task, instructional environment, person,
performance, and home environment. In many studies, especially those concerned with the design of instructional materials, characteristics of the task were manipulated, such as questions, wording, level of difficulty, and instructional medium. A number of studies used variables that could be considered either aspects of task or instructional environment. They included evaluation, reward, teacher control, and task/reward structure (i.e., individualistic, cooperative, or competitive). Variables that were clearly related to the instructional environment included class morale, teacher encouragement, and the school itself. There are studies in which subjects were divided on the basis of objective assessments of their personal traits and states such as gender, grade level, achievement, need for achievement, locus of control, attribution of outcome, test anxiety, level of aspiration, perceived competence, perceived value of task, anticipated enjoyment, and time spent on homework. CM has been correlated with scores attained on tasks. It has also been correlated with demographic characteristics such as parents' education and educational materials in the home.

**Grade level and special and minority populations.** Of the studies conducted in schools, various grade levels were chosen. Eight were of high school age pupils (Dodge, 1986; Herndon, 1987, 1988; Kicanas, 1981; Kinzie & Sullivan, 1989; Kremer, 1976; Okolo, Hinsey, & Youseflan, 1990; Pascarella, Walberg, Junker, & Haertel, 1981). Five dealt with middle schoolers (Clinkenbeard, 1989;
Lopez & Sullivan, 1990; Malouf, 1987-88; Pascarella et al., 1981; Pollock & Sullivan, 1990). One was a study of first graders (Wong, 1979). Fourteen of the investigations focused on grades four, five, and/or six (Allen, 1979; Gerhart, 1982; Hughes, 1982; Hughes, Sullivan, & Beaird, 1986; Hughes, Sullivan, & Mosley, 1985; Kremer, 1976; Mosley, 1983; Mosley, Haas, & Story, 1984; Noss, 1979; Rieber, 1990; Seymour, 1986; Seymour, Sullivan, Story, & Mosley, 1986; Story, 1984; Weisskoff, 1981). Frank (1979) studied adults, and although some were college students the research was not connected with school. Two studies were done with children who had been designated learning disabled (Malouf, 1987-88; Okolo, et al., 1990). The sample in the Okolo inquiry was, furthermore, composed entirely of African-American children. In Lopez and Sullivan (1990), all the students were Hispanic. It was noted in Noss (1979) that the sample happened to include no one who tested in the lower quarter on a national achievement test.

Task content. A factor held constant in the studies has been task content. The content areas of the activities that were continued included language (Herndon, 1987, 1988; Hughes, 1982; Hughes et al., 1986; Hughes et al., 1985; Malouf, 1987-88; Mosley, 1983; Story, 1984; Weisskoff, 1981); science (Allen, 1979; Kremer, 1976; Lopez & Sullivan, 1990; Noss, 1979; Pascarella et al., 1981; Pollock & Sullivan, 1990; Rieber, 1990); social studies (Dodge, 1986); social studies and science (Kinzie & Sullivan, 1989;
Seymour, 1986; Seymour et al.; Mosley, 1986); computer science (Mosley et al., 1984); typing or keyboarding (Okolo et al., 1990); and art (Gerhart, 1982; Wong, 1979). Frank's (1979) study involved physical fitness.

What constitutes evidence of CM. In the majority of studies, CM was determined to have occurred if after completing their task, persons actually went on to do more on a similar task. In Kremer's (1976) study, subjects had the additional option of requesting the material needed to do even more. In four studies, the factor determining CM was not whether students returned but how much time they spent on returning (Malouf, 1987-88; Noss, 1979; Okolo et al., 1990; Wong, 1979). Rather than observing task resumption, investigators in the remainder of the studies adapted or used a design similar to one developed by Maehr (1976) in which participants indicate a level of commitment to resumption at some future time (Gerhart, 1982; Herndon, 1987, 1988; Kicanas, 1981; Kinzie & Sullivan, 1989; Lopez & Sullivan, 1990; Pollock & Sullivan, 1990; Rieber, 1990; Weisskoff, 1981).

In the single instance of survey research, Pascarella et al. (1981) utilized a nationwide sample of over 5 thousand, measuring CM according to student answers (i.e., "often," "sometimes," "seldom," or "never") about participation in eight types of non-required science activities. They used these data to locate correlations between CM in science and student perceptions of
"morale" in science class, utility of content, teacher control, and teacher encouragement. The activities are:

1. Read science articles in newspapers
2. Worked with science-related hobbies
3. Gone to hear people give talks on science
4. Read science articles in magazines
5. Watched science shows on TV
6. Read books about science or scientists
7. Talked about science topics with your friends
8. Done science projects

While many science-related activities are covered, the items may not account for those that respondents do not realize are science-related—for example, reading a science fiction book about eco-disaster, watching a TV show about military equipment, or raising a garden.

Because the form of the task a student initially works on may not be the same as the form in which the task is resumed, initial and subsequent forms that have been investigated are described separately in the following two subsections. The first reviews initial tasks and the manipulated conditions, or situation variables, under which they were done. The second is a review of the general forms of the tasks as they were resumed and the range of choice students had when resuming them. (Although task form is comprised of many factors [Blumenfeld et al., 1987], for the
purpose of making simple distinctions general categories only are used here.)

Form of initial task. For an initial task in which to engage students, several CM studies have relied on the word find, or word search, a printed puzzle in which rows and columns of letters camouflage hidden words. After first being used by Weisskoff (1981), the word puzzle was adopted as a paradigm by Sullivan and his colleagues (i.e., Hughes, 1982; Hughes et al., 1986; Hughes et al., 1985; Mosley, 1983; Story, 1984). Weisskoff (1981) cited a number of sources attesting to the value of such games in teaching the language arts. Still, the purpose or learning objective of locating words among or within other words on a printed page is questionable for upper elementary pupils, especially non-remedial ones. Frank Smith, in his 1986 book, Insult to Intelligence, suggests that game-like activities that do not reflect the reading, writing, and language functions of daily life are "irrelevant and misleading" (p. 11).

Weisskoff compared CM under two conditions. Puzzles were presented to one set of students along with a recording of a rock song from which the puzzle's words had been drawn; to a second set of students, as the puzzles were presented, the words to the song were recited by the investigator. The other five studies investigated whether CM would differ according to how students learned (or, in the Hughes studies, expected to learn) the results
of their work: (a) by figuring their own score or (b) from the teacher as (i) written score only, (ii) score and brief written comment, or (iii) comment only.

Mosley (1983) suggested, in retrospect, that a single instance of one written evaluative comment or another would be unlikely to influence a pupil's decision to return to a task or not. Environmental factors such as the teacher's orientation toward control or student autonomy would be more likely to play a role. Hughes et al. (1985) made a similar point, stating that CM

...connotes a condition that extends over a long period of time. Ironically, only immediate return to a task, a short-term indicator, has typically been used as the dependent measure....Extreme caution should be exercised in generalizing from such studies to longer term...behaviors. (p. 214)

In a paper that followed, however, Hughes et al. (1986) again used immediate return to task and repeated the caution. In 1990, Pollock and Sullivan in their discussion were still making essentially the same recommendation, i.e., whether the results "would persist over a longer period are also open to further study" (p. 258). The irony may be that researchers from this group have persisted in using the very brief encounter with students as a basis for defining CM.

Wong's (1979) children watched a demonstration of puppet making. As in most of the puzzle studies, incentives were manipulated. But rather than written feedback he manipulated rewards. To make a puppet of their own, his subjects were: (a)
promised and given candy; (b) given candy unexpectedly; or (c) neither promised nor given any reward.

Reading was the form of task in ten investigations. In each, it was done in conjunction with questions. Dodge (1986) explored whether pupils in English class who read a six-page non-fiction assignment would then choose to also read an optional piece of related content. His treatments reflected his concern as to whether their decision to continue would be influenced by: (a) uncertainty-arousing questions interspersed through the text; and (b) "human interest" attributes in the text. Herndon (1987; 1988) asked students to read a lesson on syllogisms, in order to learn whether they would be more willing to continue if the examples used: (a) named specific people, places, and things that corresponded to the interests of each individual student; (b) corresponded to general interests of the group; or (c) were in abstract, general terms. Kremer's (1976) study also involved answering test-like questions.

The other studies utilizing reading tasks involved use of microcomputer programs. Like Herndon's, the reading tasks were functional. Subjects read self-instructional programs: factual texts followed by questions. Treatment conditions included positive comments imbedded in the program, no comments, different degrees of user control over branching, questions requiring recognition (i.e., multiple choice) or recall (i.e., fill-in), and
animated versus static graphics (Kinzie & Sullivan, 1989; Lopez & Sullivan, 1990; Mosley et al., 1984; Pollock & Sullivan, 1990; Rieber, 1990). One investigation was a media comparison study, in which preference for a computerized version was compared to preference for an ostensibly equivalent paper-and-pencil version (Seymour et al., 1986). Two studies employing the computer medium did not involve reading: Okolo et al. (1990) compared CM to use a drill format to that of a game; Malouf (1987-88) did a media comparison of computer to paper and pencil.

Gerhart's (1982) subjects made a crayon drawing and created designs with tangrams. Frank (1979) set up parallel daily exercise programs for adults, one set working in a group and the other in solitary fashion.

In the remaining studies, definitions of CM were not so tightly lashed to a specific initial task. That is, they left somewhat more leeway to include continuations of a wider variety of tasks that did not have to be specified beforehand. The initial work in Allen (1979) was a two-week instructional unit, taught to some classes through use of a cooperative learning structure and to others in a conventional, non-cooperative structure. Kicanas's (1981) students initially carried out a variety of helping acts, such as assisting teachers, donating to a cause, helping on a soup line, picking up litter, and tutoring. Each treatment group did their tasks under a different combination
of conditions, namely, the presence or absence of: (a) reward, (b) requirement, and (c) evaluation. Whether the operational definition used by Noss (1979) met Maehr's specifications is questionable. It did not seem to require that students' work be a continuation of a prior task or area: any project in science would count. Pascarella et al. (1981), also, included experience in anything having to do with science.

**Form of subsequent activity and range of choices allowed.** CM cannot be expected to occur at the behest of another person, much less an adult. Indeed, Maehr (1976) hypothesized that freedom of choice contributes to the potential for its occurrence. However, in most of the in-school studies, instances were counted only if they occurred during explicit occasions arranged by the investigators. In addition, as they looked for resumptions, most investigators placed severe limits on activities permitted to compete for their subjects' interest. Such a limit is not unlike the narrow range of choices likely to exist during a given class period. On the other hand, unless the task in question is very stimulating, pupils can hardly be expected to find something that "turns them on" under such a limitation.

Pupils in the word-search puzzle studies (with the exception of Weisskoff [1981], noted below) had only the same type or a different type of word puzzle to choose from. Seymour's (1986) subjects, other than continuing by answering further questions,
could do a word puzzle or read a book. In Seymour et al. (1986) and Mosley et al. (1984) the only choice was between a computerized and a paper-and-pencil form of substantially identical content.

In several studies, pupils were given a "free activity period." The amount of freedom differs across studies. Wong (1979) was interested in whether pupils would attempt to make puppets, according to instruction they had received. In their free period, they were also allowed to play games and work on regular reading and math tasks. In Allen's (1979) free period the variety was wider. Other than return to science apparatus they had used before, pupils could read, write, draw, play games, and talk. Malouf (1987-88), looking for continuation of the language task in either of two computer formats, permitted a word puzzle, a spelling game, a functional reading exercise, and reading a book. Because Okolo et al. (1990) utilized regular resource room periods, subjects could return to typing in one of the computerized formats or do any activities normally permitted there. Kremer (1976) gave a free period in which one choice was to answer more test-like questions. It should be noted, in addition, that in the foregoing studies the period in which subjects were monitored for resumptions was no more than one hour and as brief as ten minutes.
Four studies placed virtually no limits on options inasmuch as the tasks could be continued at home. Dodge (1986) looked for pupils' willingness to read a specific piece that gave further information on the topic of their initial reading. Frank (1979) followed the tendency of participants to continue or cease their exercise regimen when left on their own. The questions to pupils about their non-required activities in the Pascarella et al. (1981) survey were applicable to both home and school. In fact, some data was gathered about characteristics of students' homes. Noss (1979) focused on science projects. That they were mandatory assignments rather than optional resumptions would appear to conflict with an important qualification of Maehr's definition. Nevertheless, her design permitted substantial choice within the assignment, providing pupils a greater opportunity than pupils in other studies to engage in an activity that turned them on.

In the remaining inquiries, subjects did not have an opportunity to return to their activity; instead, they indicated how strong the likelihood that they would. For Gerhart (1982), the return would be to drawing or tangrams; for Herndon (1987; 1988), to another self-instructional program on syllogisms; for Weisskoff (1981), to a set of word puzzles similar to that already done. Rieber (1990) asked about continuing the two different forms of CAI or beginning a word search on a different topic. In three studies (Kinzie & Sullivan, 1989; Lopez & Sullivan, 1990; Pollock & Sullivan, 1990), pupils were to indicate whether it was
the computer or the topic (i.e., the form or the content) or both that would occasion their continuation. Kicanas (1981) asked pupils whether they would continue to engage in helping acts. Pollock and Sullivan (1990) acknowledged that "having students complete the continuing motivation task, in addition to reporting their preference for it, could...yield more robust data..." (p. 258). Clinkenbeard (1990), rather than ask students directly for their choice, used a technique resembling a thematic apperception test (TAT) (McClelland, 1985). Presented with a story about a student doing a project, subjects were to state whether or not he would be likely to continue and why.

**Interval before resumption.** Although turned on by a task or some aspect of it, children may not find themselves in circumstances that are comfortable for continuing it until quite a bit later, perhaps weeks or years. Furthermore, the time and place at which a task is resumed is hardly something that can be predicted, especially without a great deal of knowledge about children's school and home lives. In the service of precise operational definitions, however, research designs have tended to ignore these rather common-sense possibilities, calling for attention to proximal returns only.

Most investigations allowed for the possibility of resumption no more than two days after the initial activity, with several attending to immediate resumptions only. Hughes (1982) took
readings of CM one day then one week after the treatment. Other designs were slightly less restrictive, looking not at a single brief period of time but a somewhat longer, cumulative period. Wong (1979), for example, took account of the free period in each of the first three days that followed the initial activity. Noss (1979) looked at the results of continuations that had occurred during a whole week, and Dodge (1986) waited for the results of two weeks. Okolo et al. (1990) and Frank (1979) considered longer-term continuation, covering eight and ten weeks respectively. It must be remembered, though, that each of these investigations focused on resumption of a single activity. The Pascarella et al. (1981) survey does not appear to have limited its respondents to a time period.

Variations in form considered. A classroom task may be relatively convergent (i.e., closed-ended) or divergent (i.e., open-ended). The great majority of resumptions studied have been continuations or repetitions of convergent tasks. Several studies, however, appear to have left some room for pupils to extend, elaborate, or vary tasks. The tasks themselves are more divergent. Allen's (1979) pupils were invited to use their science apparatus again, apparently without being reminded exactly how. Noss' (1979) students were apparently free to create their own science projects. Wong's (1979) children were encouraged to design their puppets to suit themselves. Kicanas (1981) was interested in ways to propagate all forms of generosity in his
young men. If the experimental subjects who had done convergent tasks were given the time and the means to do variations on them, such continuations might conceivably have occurred.

Studies of CM, with their diverse designs, variables, and analyses, have yielded useful information for predicting and controlling student resumption of work in certain circumstances, such as when using certain instructional materials. Importantly, though, this review would seem to argue that investigators, for the most part, have overlooked the feeling-laden qualities that pervade an activity as children first experience it or return to it. They have bypassed opportunities to expand their interpretations of their findings through interviews or observations. By paying little or no attention to contextual elements such as the children's past experiences or the complexities of teaching-learning situations, they have not learned how those antecedent conditions may have eventuated in meaning and in motivation to continue schoolwork.

Portraying CM Qualitatively

Definitive and sensitizing concepts. In a paper first published in 1955, the sociologist, Herbert Blumer, held that definitive concepts have limited value in the study of the empirical social world. Because his idea goes far to explain the weakness of the quantitative research in CM, it is appropriate to
quote him at length (here, from a 1970 reprint of the original article):

The concepts of our discipline are fundamentally sensitizing instruments. Hence, I call them 'sensitizing concepts' and put them in contrast with definitive concepts....A definitive concept refers precisely to what is common to a class of objects, by the aid of a clear definition in terms of attributes or fixed benchmarks. This definition, or the benchmarks, serve as a means of clearly identifying the individual instance of the class and the make-up of that instance that is covered by the concept. A sensitizing concept lacks such specification of attributes or benchmarks and consequently it does not enable the user to move directly to the instance and its relevant content. Instead, it gives the user a general sense of reference and guidance in approaching empirical instances. Whereas definitive concepts provide prescriptions of what to see, sensitizing concepts merely suggest directions along which to look [emphasis added]. (p. 91)

Blumer held that social theory is weakened by concepts that are ambiguous and that eventually get taken for granted. But he explained that to make concepts clear by making them definitive is inadequate. He cited "intelligence" as an example: it is far too complex and rich a concept to be contained in an operational definition, "intelligence quotient."

Sensitizing concepts, on the other hand, need not be vague. "Relevant features of [empirical] instances, which one finds not to be covered adequately by what the concept asserts and implies, become the means of revising the concept." This is done "through careful and imaginative study of the stubborn world to which such concepts are addressed" (p. 93). Because every object and event that we may consider in the social world has a unique, distinctive character and exists in a distinctive context, the concepts that
represent their relationships should be sensitizing, or suggestive, rather than definitive. Quoting Blumer again:

We do not cleave aside what gives each instance its peculiar character and restrict ourselves to what it has in common with the other instances. What is common (i.e., what the concept refers to) is expressed in a distinctive manner in each empirical instance. (p. 92)

Following Blumer, clarification of an educational concept like continuing motivation is not accomplished by defining it. To couch CM in operational terms is to prescribe what to see in it, impoverish it, and lose the distinctive character of its instances and their context. Furthermore, paraphrasing Blumer, the fact that we may label an experimental construct CM gives no assurance that it fits the CM that is experienced in a child’s daily life. "Such a relation has to be established and not presumed" (p. 91). The quantitative studies of CM, while making reference to Maehr’s definition, do not seem to have established that their operational definitions cover the variety of cases that he suggested or the notion of being turned on. CM is best treated as a sensitizing concept.

Qualitative studies. Very few authors have explored CM in naturalistic settings, treating it as a sensitizing concept; very few have examined qualities, rather than quantities, of the elements that flow around and through it.

Trabert (1986) interviewed current and former volunteers in adult literacy programs to learn why they continued as tutors,
moved elsewhere in their organization, or left. Though not connected with school, her focus was in education, and the task content was language. By asking subjects to look back over months and years, she was open to the virtually unlimited choices they had encountered. Questioning delved into participants' motives and perceptions. Trabert's study also differs from others in that it deals with: (a) tasks that were initially voluntary, not required; and (b) continuations that in some cases lasted for years.

The present author performed a naturalistic study (Hoffman, 1988) in which high school freshmen in a unique, self-contained "computer-saturated" program were observed in class through an entire school year and interviewed to find out their perceptions and attitudes about learning and how their interests reflected their program. CM was considered to be manifest in any activity that their schoolwork had led or attracted them to do on their own. Students described any such activities and also how they were using their computer on their own at school and at home. Their activities were grouped into personal, domestic, job-related, and several other categories. A large proportion of the independent activities reported involved a computer. Computer activities based on interests developed outside of school were mentioned far more than those that evolved from their schoolwork. Of their independent activities rooted in schoolwork, most appeared to come from interests they had already had prior to
entering the program. It was concluded that the program, despite its heavy investment in computers, "did not appear to bring about an increase in continuing motivation to utilize academic subject matter" (p. 6).

Although the Kicanas (1981) study used a quasi-experimental design, it appears that the activities involved comprised a credible learning experience, legitimately part of the school's curriculum. This was action research in that the investigator was principal of the school, designed an elaborate system of rewards and requirements to fit the aims of the school, and gave instructions personally to the several hundred pupils who took part. Noss (1979) collected qualitative data incidentally about how students spent their time and speculated from it on possible impacts of heavy television watching on CM. Despite her study's complex, long-term treatment by teachers who were not extensively trained, Noss was unable to describe how they actually carried it out, because she did not observe them.

In an appendix to his experimental study, Dodge (1986) lists over 150 student replies to his requests for: (a) their reasons for carrying out an additional reading task on their own or not; (b) descriptions of their thoughts and conversations about the continued task; and (c) their comments and questions about the task and the study. It appears that this data was utilized only to the extent of noting: (1) the two aspects of the readings most
commonly talked about or thought about; and (2) a recent news event and a book previously read that students associated with the content of the reading task. This connection is interesting in that it demonstrates a tenet of Maehr's theory, that students' personal experiences can result in a task being meaningful to them.

Analysis by Pascarella et al. (1981) of the numerous questions posed in a widely distributed survey begins to yield a complex picture of environments in which personal investment does and does not seem to be nurtured. But it is a coarse mosaic in which the tiles are separated by gaps and cracks. It begs for the clarification and connection that could come from actually talking with the students about their responses.

During the same time period as the present investigation, Oldfather (1991) conducted a naturalistic study asking the question, "What are students' perceptions of their own reasons/purposes for being or not being involved in learning activities?" It was done in class of fifth and sixth graders, in a school described as student-centered and humanistic, and with a teacher under whom the components of intrinsic motivation (Deci & Ryan, 1985) were known to flourish. Oldfather was a participant-observer through nearly an entire school year and interviewed approximately half of the students. Recognizing that students construct their own meanings, she looked for the
conditions that were supportive of "continuing impulse to learn," their ongoing intrinsically motivated engagement in their work. Many of the premises of her research are congruent with mine, however the study was not available until much of my analysis had been completed.

Oldfather did not measure a narrow operational construct but rather learned how CM in a broad sense was part of the manifestations of in-depth student involvement in an environment that largely enabled children to stay turned on. She found that pupils were profoundly impressed by the responsiveness in the classroom to their self-expression—by their being taken seriously, or honored. Through their resulting deep engagement, students discovered "their own voices," which included metacognition about their own thoughts. Students had "deep personal ownership of their learning" (p. 230). The motivating curriculum included learning about the "real world" and "personally relevant concerns." The research considered pros and cons of cooperative group work. Students' thoughts about and ways of coping with undesired tasks were examined. Qualities of the teacher were described in detail.

Directions taken by the present study. The studies reviewed above point to a number of potentially fruitful research routes to pursue. Because investigations of CM done at a variety of grade levels have overwhelmingly been treatment studies, there is room
for naturalistic studies at all grade levels. Now that researchers have recognized the limitations of measuring CM when students have had only brief encounters with tasks, it would be appropriate to investigate the emergence of CM after students have engaged in a coherent series of tasks over longer periods. Monitoring for CM over a longer duration than has generally been done could yield instances of CM that would otherwise be overlooked. Researchers have tended to use task content and task form as vehicles for CM: independent variables, singular and prearranged in controlled environments. Going beyond such laboratory studies, it would be worthwhile to investigate which content and forms students choose to continue when plenty of everyday options are available, and what conditions are antecedent (Maehr, 1984) to their choices. CM in expected areas has been found by observing students' actual choices and by eliciting their level of future commitment. CM in areas that the investigator has not expected could be found by interviewing students about their motives and their past experiences. The present study is an attempt to incorporate the research directions that have been inferred from the research done thus far and noted here.

In this chapter I have explained the theoretical basis of CM, explored interpretations of the concept, and reviewed empirical studies of the phenomenon.
CHAPTER III

METHODOLOGY

Chapter Two included discussions of methodologies used in previous research in CM. Chapter Three details the methodology used in this study. The chapter includes: (1) the epistemological assumptions on which the methodology is based; (2) the research design, including the various data collection methods; (3) the data analysis procedures and rationales; and (4) ways in which the methodological practices have assured that the findings warrant the trust of the reader.

Epistemological Assumptions

As explained in Chapter One, the epistemological paradigm guiding this research is variously known as the qualitative, interpretive, naturalistic, or phenomenological (Bogdan & Biklen, 1982; Bredo & Feinberg, 1982; Lincoln & Guba, 1985; McCutcheon, 1981). This paradigm is characterized by certain assumptions or axioms, a number of important ones being summarized here.
In this view, there is no single, objective reality. Reality is something that each person constructs for him/herself. So, there are multiple constructed realities (Lincoln & Guba, 1985). There are no brute facts—uninterpreted facts that are simply "out there" (Bernstein, 1976). Hence, there is no single truth. That is, for a belief or statement to be true, it cannot correspond to a single, objective reality, only to one or another construction. Truth is agreement among people's constructions, with the caveat that as time and place changes so do constructions (Lincoln & Guba, 1985; Smith, 1984). One's constructions are influenced by one's values and those in one's social milieu. Consequently, research findings are interpretations bound by the values of the inquirer and of the context in which the research is carried out (Lincoln & Guba, 1985). The values of the researcher in the present study are discussed in the introductory chapter and in this methodology chapter.

As I have said earlier, in the interpretive view, understanding is interpretation (Bernstein, 1983). To understand reality is to interpret the meanings that persons attach to their actions, relationships, and surroundings. A society, or any social system, is not a system of factors external to people; rather, it is a network of shared meanings—people's shared interpretations of their experiences—based upon people's past history and present perceptions of the order of society (Carr & Kemmis, 1986). It is fitting that Maehr's Theory of Personal
Investment, with the centrality it gives to the notion of meaning anchored in past and present experience, should be investigated within the paradigm in which meaning is likewise crucial.

The terms *emic* and *etic* were coined in 1954 by linguist Kenneth Pike to draw an analogy between two anthropological research strategies and two kinds of linguistic analysis, phonemics and phonetics. There are emic and etic aspects to this study. In an emic approach, one studies an occurrence as it appears to those involved, maintaining fidelity to what the participants say and think but without losing the ability to think critically. Harris (1968) quotes Pike: "Emic distinctions require one to enter the world of purpose, meaning, and attitudes....motives, interests, responses, conflicts, and personality development" (p. 570). In an etic approach, one studies an occurrence "as it appears within the frame of cross-culturally valid...categories" (p. 315). An etic statement of an occurrence requires little inference and would receive intersubjective agreement (e.g., that the students were assigned to work at a list of tasks and some did so). An emic statement deals with a participant's interpretation of the status or acceptability of an occurrence (e.g., that the teachers felt the work period was going well) (Harris, 1968).

Hence, in the present research, it is understood that the categories posited by Maehr (e.g., social personal incentives
versus extrinsic rewards) and Deci (e.g., controlling versus informational events) are etic distinctions. They are distinctions that can help interested persons to focus on aspects of a child's actions; but at the same time they are oversimplifications that necessarily lack the complexity, subtlety, and nuance that a child—a participant—would experience. I do not attempt to form emic categories, if that is possible. Rather, by describing the children's actions in context, I hope to make the etic categories more meaningful and useful.

In contrast to the notion of causality, the naturalistic paradigm recognizes continual mutual shaping among elements in a situation. Judgments as to which elements might best explain a phenomenon are dependent on the time and place of the particular occurrence of the phenomenon and the investigator's purpose (Lincoln & Guba, 1985). The relationship between the investigator and the participants and milieu is also one of mutual shaping. The methods, foci, findings, and conclusions of the observer are not determined independent of the people and things being observed. The observer is influenced by the observed. Conversely, it is recognized that the observed is necessarily changed in some way by the observer (Lincoln & Guba, 1985).

"Prediction and control are unlikely outcomes" of research within this paradigm (Lincoln & Guba, 1985, p. 37). The present
research is not based on a premise that tools should be developed to enable educators to predict and thereby control student motivation, increasing it in the subject matter and task forms they have predetermined to be important. Instead, the premise is that instructional environments can be managed or shaped (Lincoln & Guba, 1985, p. 151) in ways that enable children to construct understandings of content by finding what is relevant—meaningful—to them. In such an environment, children will be allowed and encouraged to invest in the content in ways that spring from its meaning to them. In addition, by bringing out aspects of CM that have not been adequately described in the past, the study is likely to raise new questions. Indeed, research in the naturalistic paradigm is expected to raise new questions about its topic (Lincoln & Guba, 1985).

The process of achieving an adequate understanding has been depicted by Bredo and Feinberg (1982) as comprising three levels, although they do not necessarily occur in sequence. At the first level, the observer tries to see in a situation the facts—i.e., actions, relationships—that a participant sees, as the participant sees them. At the second level, the observer construes those facts, trying to determine in what manner they are being carried out—e.g., aggressively, lovingly, jokingly. At the third, the observer tries to learn what organizational structures and institutions (whether or not they are seen, understood, or acknowledged by participants) underly the facts.
What, then, is the researcher supposed to interpret: the situation itself or the participants' interpretations of the situation? It would seem to be both. Geertz used the term experience-near to mean the understanding of the participant and experience-distant to mean the conceptual framework brought by the inquirer (Bernstein, 1983). The participant sees the trees, such as relationships between people; the researcher sees the forest, such as a culture's concept of person or student. At the outset, the researcher can only place the situation in his/her own frame of reference. To set aside that frame of reference requires inspection of one's own thought processes and purging them of preconceived causes and effects. This suspension is termed bracketing (Flew, 1984). After the frames of reference—the horizons—of the participant and the researcher have been distinguished, they may then be fused together (Bernstein, 1983). The result of such a fusion is the interpretation of the participant expanded by that of the researcher.

Research Design

As noted in Chapter One, this is a case study of a classroom. "Case studies include as many variables as possible and portray their interaction, often over a period of time" (Merriam, 1988, p. 13). Case studies illustrate complexities. They are particularly useful for illuminating processes rather than products, and
contexts rather than particular variables. They are heuristic, bringing out previously unknown meanings and relationships, leading to the rethinking of phenomena. Through case studies, one does not try to uncover truth but to arrive at a credible interpretation (Merriam, 1988).

Of three levels of case study--descriptive, interpretive, and evaluative--the present one is primarily interpretive in that it attempts "to illustrate, support, or challenge theoretical assumptions held prior to the data gathering" (Merriam, 1988, p. 27). This case study is psychological in its concern with the thinking and behavior of individuals and is informed by psychological concepts such as motivation, personal investment, and self-efficacy. But it is also sociological (Merriam, 1988) in its concern with phenomena such as sociocultural context and social personal incentives. It belongs to the realm of social psychology, the study of social interaction based upon the psychology of group life. Because this study is carried out in the field rather than the laboratory, it follows the sociological rather than the psychological tradition within social psychology (McCall & Simmons, 1982).

As established in Chapter Two, research into CM has barely begun to consider the complex contextual factors that influence what students think, feel, and do. Continuing motivation has been measured in laboratory settings and brief visits to classrooms.
In such circumstances, student behaviors and motives cannot be expected to be the same as in normal classroom situations. Treatments have often been administered by persons other than the regular classroom teachers. It is likely that the investigators have differed from the teachers in age and gender. Students and investigators, being unfamiliar with each other, have probably been quite uncertain of what to expect of each other. Students know they are in a temporary situation. The visiting adults are probably seen as not having the same authority as the teachers. Comments by investigators elicit inferences different from those that would be elicited by identical comments by the teachers. Changes in pupils' thoughts and behavior that might have been due to such deviations from everyday circumstances have for the most part been undocumented in the studies.

To form a clearer picture of how and why CM develops and manifests throughout the course of an intact instructional program, instances of CM and other personal investment have to be located and described in terms of the circumstances surrounding them. To do so, an appropriate research design would include naturalistic observation and interviews. The sections to follow describe the selection of a school and classroom in which CM could be investigated in context, the establishment of the researcher and the study at that site, and the various data collection methods—observation, interview, and others—employed in the study.
Throughout the study, in the interest of confidentiality, the names of the school, the participants, and specific instructional programs have been changed.

Site Selection, Entry, and Role in the School

Because my role and my relationship with the participants at the research site were very carefully and purposefully planned and carried out, a description of significant aspects of how that role and relationship were achieved is relevant to the study.

The major factors determining the site would be: (1) an acknowledged degree of freedom for pupils to choose their content and activities; (2) the willingness of principal and faculty to participate in the study; and (3) my having a feeling of rapport with them, especially those with whom I would be working closely. Five Ohio schools received strong consideration. One was a suburban alternative high school in which I had carried out observations on several previous occasions and where faculty, administrators, and students seemed comfortable with my presence. The others were elementary schools recommended to me by colleagues. In two elementary alternative schools in a large city district, the principals and/or faculties were not comfortable with my proposal. A principal and teacher at a third elementary building in a suburban district were willing to participate, but
the population there was quite homogeneous in terms of racial composition and socioeconomic status.

A fourth recommendation was a school I shall call Southside Elementary, another alternative school in the city. In my first contact there, a phone call, the principal immediately said he was interested and put me in touch with a teacher in whose class he felt my project would fit well. My selection of Southside over the high school was for reasons noted in Chapter One. One was my experience as an elementary teacher. The other was the likelihood that observing individuals in a self-contained classroom would be less obtrusive than following them from class to class. In addition, over the course of a year, adolescents might tend to become self-conscious and less willing to share their feelings and motives than elementary children.

I met with the principal and then with the two teachers—I shall call them Ron Haines and Nellie Gregson—in whose class I would be working. In doing so, I determined that they and I were philosophically quite compatible. (See my preference claims in Chapter One.) From their interest in intrinsic motivation and their stated commitment to ideas such as cultural diversity, risk taking, open communication, and choices among activities, I inferred that: (1) CM would not be hard to come by; (2) I would feel comfortable, not alien, working there; and (3) students would see me as a consonant, not a dissonant, force in their classroom.
The principal received a copy of my research proposal; the teachers were given write-ups answering questions they might have about the study and my proposed role in the classroom (see Appendix A). All received copies of my curriculum vitae. Formal permission to conduct the study was obtained from the Human Subjects Review Committee of The Ohio State University, the school district, the principal, and the two teachers. Along with parents and other community members who were encouraged to participate at Southside, I was welcome there. (Further description of the school is given in Chapter Four.)

I was introduced at a faculty meeting in late August, where I explained in general terms the nature and length of my stay and offered to be of assistance to any teacher in any way possible. As an experienced, certified teacher, I could be expected to know something of how to proceed. To be perceived as a contributor and, just as importantly, to actually be a contributor amid the sometimes hectic flow of the school day, I made a constant effort to achieve and maintain rapport with the adults--faculty, professional and auxiliary staff, and active parents--who were heavily invested in that flow. On several occasions I obliged requests from teachers to assist individual children and to help out with special events. I interacted on a first name basis with principal and staff. At lunchtime I often joined staff in the lounge, and they would sometimes ask about the study and its progress. I attended faculty meetings from time to time. I was
invited and attended faculty Friday happy hours, as well. The principal did not question my progress, but to re-establish my credibility I made sure to meet with him to report my progress before Christmas break. Throughout the year I sensed that by and large I was seen as a trusted co-worker at Southside. At year end, I made a presentation of my preliminary research findings to the faculty.

**Emergent Design**

The methods used to collect data included participant observation, student interviews, teacher interviews and discussions, parent interviews, inspection of students' work products (primarily daily journal entries), logs of their home activities, perusal of students' cumulative personal folders, classroom videotaping, and questionnaires. As noted in Chapter One, a tentative schedule of data collection was planned in advance. But it was modified from time to time, kept flexible in order to (a) address questions as they arose; (b) take best advantage of opportunities in the changeable daily class schedule; and (c) be respectful of the needs of the teachers. Emergent design such as this one is appropriate in naturalistic research because "what emerges as a function of the interaction between inquirer and phenomenon is largely unpredictable in advance" (Lincoln & Guba, 1985, p. 41). Table 2 shows the actual sequence
### Table 2

**Sequence of Data Collection by Months**

<table>
<thead>
<tr>
<th>Method</th>
<th>Aug-Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May-Jun</th>
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<tbody>
<tr>
<td>Participant observation</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Read daily journal entries</td>
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<td>x</td>
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<tr>
<td>Teacher interviews</td>
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<td>Student interviews</td>
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<td>Activity chronicles</td>
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<td>Parent interviews</td>
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<tr>
<td>Co-observation</td>
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<td>Videotaping</td>
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<tr>
<td>Questionnaires</td>
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<td>x</td>
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</table>

*Note.* An x indicates that data was collected during the month.
of data collection methods. Descriptions of the various methods follow.

**Participant Observation**

In order to see, understand, and record circumstances and occurrences relevant to CM in the instructional environment, I assumed the role of participant observer.

**Introduction to students and parents.** The second day of school, after a day of observing anonymously, I introduced myself to the class during their morning circle. I said I was an observer, interested in all the things teachers and students do. I stated that I would let them know when I would be available to help them but that most often I would be watching, listening, and asking questions. I noted that I used to be a teacher, before that a student like themselves, and like some of their parents I was going to the University.

Near the end of September, at parents' open house, I was given the privilege of addressing parents about my project, including my need to have their written permission to include their children and to see their children's personal files. Access to standardized achievement test scores and information about past work and behavior would assist me in gathering a varied sample for interviews. I then sent home a consent form from the university (see Appendix B) and a Request for Parental Permission explaining
what I would be doing, how the children would benefit from my presence, and the provision of confidentiality (see Appendix C). Forty-eight out of 53 signed forms were returned. One of those parents granted permission for inclusion but denied access to records. Five children did not return forms and were excluded from the study but not from my classroom assistance. On occasions when I anticipated that these students might think that their actions were being studied along with the other children, I assured them that would not occur. Pupils who transferred into the class later were not asked to join the study but did receive assistance. Data about several participants who subsequently transferred elsewhere remained in the study.

**Nature of participation.** In class, the teachers referred to me formally, but pupils were welcome to use my first name. Most pupils followed the teachers' lead. Whenever I addressed the class or a large group my tone was assertive, to maintain their attention. With individual children and small groups I tried to set an adult-to-adult basis as much as possible. So that my ability to elicit facts and feelings would not be impaired, I deliberately avoided situations or potential situations in which an adult might be expected to exert authority or discipline. As a result, when I was closeby, it appeared that pupils were usually less careful to conceal stealthy behavior than when a teacher was near. Occasional disciplinary situations were unavoidable, as
when I reprimanded Joey for creating a dangerous situation on a field trip. From then on, he was reticent with me.

My participation and observation occurred primarily in the classroom but often following pupils elsewhere in the school—the library, gym, art, music, drama, etc. The majority of the time, I was an unobtrusive, "passive" participant (Evertson & Green, 1986) in the educational program of the class, watching and listening to the actions of students and teachers and recording them on paper as they occurred. At times, it was useful and appropriate to remain seated in one place; at other times it was necessary to move among the pupils to see more clearly what they were doing and to hear what they were saying. When I wished to keep from alerting children that they or their mates were being focused upon, I attempted to watch indirectly, avoiding eye contact and wearing an unresponsive facial expression to convey preoccupation. Much of the time, I carried a spiral composition book. Although I could often be seen writing, I carefully avoided obviously tipping off anyone as to whom I was writing about. I often conversed informally with children about their work or things they had said or done. After doing so, I would not write about what they said until their attention was no longer on me. When I observed large group activities, it was possible to show interest and still write about individuals, because the group's attention would shift rapidly from speaker to speaker.
I spent perhaps one quarter of my time there as an "active" participant (Evertson & Green, 1986), assisting individual pupils or small groups with their work. Sometimes the teachers suggested whom I might work with, but usually I was left to make that judgment myself. Helping students gave me opportunities to understand their capabilities and preferences and enhance my rapport with them. My tasks were much like those of an instructional aide. They included, among other things, reading with individuals, guiding library research, facilitating social studies work groups, rehearsing actors for performance, helping with the computers, laminating work products, and chaperoning field trips. To seem less "teacherly," I often ate lunch with the children, occasionally joined in playful activities, and maintained a cheerful demeanor.

System of observation. Observations were recorded on paper in a narrative manner, as field notes. Evertson and Green (1986) have said that in a narrative system one makes detailed descriptions of phenomena "in order to explain unfolding processes and to identify generic principles and patterns of behavior within specific events" (p. 172) The goal of a narrative system is "to understand...what is occurring [and] to identify factors that influence [its] occurrence..." (p. 172). In general, observations were not bounded by pre-arranged times but by the beginning and ending of situations or events as they seemed to be perceived by participants. On occasion, notes regarding actions in a
particular place or of a particular person were taken in especially great detail. The dual purpose of the greater detail of such "specimen descriptions" (Evertson & Green, 1986) was: (1) to find patterns that might not otherwise emerge; and (2) to enable detail to be passed along to the reader, contributing to the trustworthiness of the work.

The kinds of units determined in advance to have meaning were the ones that in turn would determine the meanings derived from the observations. The kinds of units to be focused upon had to be consistent with the theoretical framework guiding the study (Evertson & Green, 1986). Hence, observational units had to include or be consistent with concepts in Maehr's and Deci's theories such as perceived action possibilities, sense of competence, and sense of self-determination. Observational units would also include or be consistent with the concepts of task form and task content posited by Blumenfeld et al. (1987). In observations, time was divided into natural units. That is, the duration of focus on a person, place, or activity on any given day was governed by the duration of the actions of interest, not by a predetermined time limit (Evertson & Green, 1986).

Retrospective additions and clarifications were made after each observation. Field notes were transcribed via computer word processor. (The computer, chosen because it was most readily available, was an Apple IIe with memory expanded to 512K by means
of a Ramworks card. The program was Appleworks.) The original intent was to transcribe notes on the same day they were taken. Unfortunately, attempts in August and September to utilize a computer program specifically designed for ethnographic data analysis were unsuccessful and time consuming, with the result that transcription fell far behind observations.

Separate journals were maintained to keep reflective notes that were personal, methodological, and theoretical in nature (Evertson & Green, 1986). Some were written in situ, in brackets alongside field notes; others were written retrospectively, directly into the journals. To supplement my notes, I obtained from the teachers the flip chart sheets on which they presented each day's schedule to the children.

**Sampling in observations.** Classroom observations commenced at the very beginning of the first day of classes (Evertson & Green, 1986), to see how procedures were actually put into operation and how expectations would begin to be fulfilled or reduced with individual children. Participant observation continued through the very last week of the school year, totalling 106 of 180 days. Records of classroom observations have been numbered consecutively, from 1 through 106. In chapters to follow, statements that are based on notes of a specific day's observation are keyed to it by a numeral in parentheses, such as (#25).
Approximately 500 hours were spent in the school, with student and teacher interviews and time without children present comprising about 15% of the total. The greatest number of hours were spent there from the beginning of school in late August through October and from May through the end of school in early June. From November through April an average of 10 observations were made per month. To determine appropriate days and times to observe, the coming week's schedule was usually obtained in a Sunday evening phone call to one of the teachers.

There were two related reasons for the long duration of participant observation. First, to determine whether independent work of students was related to previous schoolwork (or put differently, which previous schoolwork, if any, was part of their independent work) it would be necessary to observe a representative sample of the content and processes they experience at school. It was not intended to be a random sample, because the aim was not to determine how much CM might occur in a representative time or situation. Rather, the aim was to locate instances of CM in whatever situations or contexts they might occur. Second, it was assumed that one's motivation to resume work on a topic could be enhanced by a certain amount of temporal distance from the original activity, allowing other ideas to become juxtaposed with it. Time would allow topics studied to ferment in students' minds—-for CM to develop, as it were.
Observations were at first directed toward purposively sampling (Merriam, 1988) as wide a variety of participants and situations (i.e., task forms, subject matter, times, locations, resources, agendas, moods, etc.) as possible. Participant observations occurred during all hours of the school day, generally lasting from two to four hours, with some substantially longer and some briefer. The research proposal stated that observations would gradually concentrate on a narrower range of persons and situations of crucial interest. In practice, my attention did gradually focus on some situations and students more than others, especially those where or with whom personal investment seemed more commonly to occur. In accordance with Becker's (1958) advice to look for "items which may serve as useful indicators of facts which are harder to observe," I presumed that the various forms of personal investment indicated a greater likelihood that CM might follow. My selection of children to assist or otherwise interact with was unintentionally influenced by differences in rapport that developed between individuals and me. Certainly, our emotional closeness or distance was mutually shaped by their actions, my interest in their actions, and intangible qualities in each of us.

Because actual occurrences of CM were rarely seen in progress, it seemed potentially more fruitful to remain open to whoever might manifest it at whatever time and place. Hence, fewer participants and situations than expected were precluded
from my attention. The teachers, alert to my interest, sometimes suggested pupils to follow. In addition, around midyear, I gave the teachers columnar sheets on which to note individuals who were showing personal investment, in what topic, and in what way they were showing it (see Appendix D). The teachers' suggestions enabled me to do "reputational" (Merriam, 1988) sampling, paying closer attention to pupils they named.

The dual role of participant and observer sometimes presented me with dilemmas as to my course of action. Andrea, a student whom I had been anxious to get to know, asked me to sit with her on a bus trip. Instead, I obliged Mr. Haines's request that I sit with Albert (#37), because the needs of the study had to be weighed against the responsibility of assisting the teachers. One day during their work time I took several pupils out into the hall to speak with them. Not wanting to disturb the teachers, I did not tell them whom I was taking, but Mr. Haines became concerned that they were not present (#46). In a few situations, Mr. Haines was unable to discern whether I was helping or just observing a group that was in need of assistance. Later, in our meeting, he asked me to be clearer in the future, so he would know whether to come over or not (#51). Dilemmas such as these did not cease, but our frequent communication and our rapport helped me to be more sensitive.
Student perceptions of the observer. Pupils asked about me when I was gone and asked how I was feeling when I returned (#9). But knowing that they did so is insufficient to understand their perceptions of me. In Kicanas’s (1981) study of CM, students were asked how honest they had been in reporting their actions to him. Similarly, on a questionnaire completed at the end of the school year, while I was out of the room, the teachers asked the pupils to indicate their perceptions of me. Some items called for check marks, others for constructed responses (see Appendix E). Although their filling it out was squeezed into the schedule and not rigorously monitored for care or absence of collaboration, individual answers and the entire set taken as a whole offer some insights into my relationships with the children. Thirty-two of the original forty-eight participating students filled it out fully or partially. In answers to yes/no and Likert-type questions, respondents indicated the following:

1. More than three-fourths felt that I had helped them a little or a lot.

2. Around one-third felt that I had bothered them or disturbed their work at least a little.

3. More than one-third indicated at least some nervousness in my presence.

4. While 80% felt I was interested in their work, about 15% felt that I was inattentive to them.
5. About 80% felt I was like a teacher, half of those feeling that I was a lot like one. Three of those also wrote favorable comments about me as a teacher, which implies that in interpreting the overall response to this question one should not assume that it conveys negative feelings.

6. Ninety percent felt I was nice to them, most indicating that this was true a lot.

7. About half felt they acted normally in my presence. About one in seven said they tried to do extra well. About one in seven admitted to acting manipulatively or surreptitiously in my presence.

8. About six in ten claimed to have been very honest when I asked them about themselves. About four in ten said they were pretty honest. One pupil admitted to being not very honest. Of respondents who had been interviewed at length, close to 80% indicated having been very honest.

The children's answers, both check-off and constructed, suggest that generally I was well-liked, that I had reasonably good rapport with them, that I could expect that their statements to me had been candid though not necessarily confiding, that deceiving me was not a major agenda among them, and that I was not distrusted. Deviations by particular individuals from these generally positive indications did not, for the most part, contradict my own interpretations of our relationships. Some
answers were surprising, though. I had not suspected, for example, that Bonnie and Albert objected to being asked "personal" questions. There were children who tended to ask for my attention and others who seemed indifferent to me. Andrea and Wendy wrote that I should have helped different people instead of the same ones. Wendy added: "Some times He ignores you." I knew I did not have much contact with either of these girls, but I was not aware that they felt slighted.

Student Interviews

In early November, I gathered groups of seven outside the classroom to brief everyone on the interviewing I would be doing. Because an assumption of the study is that CM is experienced by pupils of all kinds, the sample eventually selected for interviews was purposive (Merriam, 1988) to reflect heterogeneity in gender, race, socioeconomic status, achievement, and apparent tendency to invest or not in schoolwork. This criterion of variety would also enable readers whose main interest or experience is with children homogeneous in any of these respects to be more comfortable transferring (Lincoln & Guba, 1985) my findings to their own contexts. As noted in Chapter One, young people's mobility tends to increase with age, giving them ever greater access to resources that may facilitate CM. Also, a child who has experienced more may bring more experiences to bear on schoolwork. Therefore, more of the oldest children--5th graders--were chosen to be interviewed. Table 3 shows the distribution of interviewees by
Table 3

Sample of Students Interviewed

<table>
<thead>
<tr>
<th>Grade</th>
<th>Name</th>
<th>Ethnicity</th>
<th>Verbal</th>
<th>Math</th>
<th>Parent(s) Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>CTBS Range</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td>Caroline</td>
<td>Af.-Amer.</td>
<td>mid</td>
<td>low</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Penny</td>
<td>Caucasian</td>
<td>mid-low</td>
<td>mid-low</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Wendy</td>
<td>Caucasian</td>
<td>mid-high</td>
<td>mid-low</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Jackie</td>
<td>Caucasian</td>
<td>high</td>
<td>high</td>
<td>no</td>
</tr>
<tr>
<td>4th</td>
<td>Clarissa</td>
<td>Af.-Amer.</td>
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<td>yes</td>
</tr>
<tr>
<td></td>
<td>Ann</td>
<td>Oriental</td>
<td>mid-high</td>
<td>high</td>
<td>yes</td>
</tr>
<tr>
<td>3rd</td>
<td>Estelle</td>
<td>Af.-Amer.</td>
<td>mid</td>
<td>low</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Tina</td>
<td>Caucasian</td>
<td>high</td>
<td>high</td>
<td>yes</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td>Albert</td>
<td>Af.-Amer.</td>
<td>mid</td>
<td>mid-high</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Victor</td>
<td>Af.-Amer.</td>
<td>mid</td>
<td>mid</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Dion</td>
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<td>low</td>
<td>mid-low</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Dallas</td>
<td>Af.-Amer.</td>
<td>mid-high</td>
<td>mid</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Thomas</td>
<td>Af.-Amer.</td>
<td>low</td>
<td>low</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Kenneth</td>
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<td>high</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Patrick</td>
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<td>mid-high</td>
<td>low</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>Gary</td>
<td>Caucasian</td>
<td>high</td>
<td>mid</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>Ted</td>
<td>Caucasian</td>
<td>high</td>
<td>high</td>
<td>no</td>
</tr>
<tr>
<td>4th</td>
<td>none</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>Freddy</td>
<td>Af.-Amer.</td>
<td>low</td>
<td>low</td>
<td>yes</td>
</tr>
</tbody>
</table>
gender, grade, race, and percentile range on the verbal and math batteries of the California Test of Basic Skills. It also indicates whose parent or parents were interviewed. Eleven interviewees were nominally in Mr. Haines's room; seven were in Mrs. Gregson's.

When I asked individuals to join me with my tape recorder in the speech therapy room, their demeanor ranged from reticent to ebullient. To build rapport, I usually began with a card trick or a small object of interest. The interviews were semi-structured. That is, based on my observations of each child, I selected questions from a predetermined list and probed replies with extemporaneous follow-up questions. Interviewees were asked about such things as: topics and events that have interested them in school and out; things they have done, made, or wondered about on their own; the history of those activities; their reasons for performing certain tasks as they did; their understanding of terms and practices used by the teachers; expectations about school; self-perceptions and aspirations; and others (see Appendix F). The question posed most often was, "Out of the things you've done or made in school this year, are there any that you've continued to do on your own?" The eighteen children were interviewed in depth, for an average of about forty minutes each. Eight were recalled days or weeks later for a second session of about fifteen minutes, to expand upon and clarify their answers.
Close to the end of the year, I engaged eight more children in five- to ten-minute, taped interviews. They were asked about the kinds of feedback they received in class and the tasks they would be most eager to go back to (see Appendix G). For these interviews, I chose students whom I felt I did not know as well as most others, plus one or two who dearly wanted to be interviewed. (Because I had already interviewed a sufficient variety of pupils, these self-selected interviewees did not upset the representativeness of the sample. I welcomed those who would willingly share their thoughts.)

Tapes were not transcribed verbatim. Instead, detailed interpretive notes were made via word processor, with numerals inserted at intervals, corresponding to points on the tape. The tapes themselves were retained during the analysis period and relevant portions replayed as necessary.

The truth of information given by pupils in interviews was sometimes confirmed by a teacher, a parent, or in a classroom observation. Without such confirmation, my judgment of veracity relied on my familiarity with the pupils and my perception of their demeanor when answering. Becker (1970) suggests that although the attitude expressed by an interviewee (his example is a medical student) may be either idealistic or cynical, most actually entertain both, and it is the task of the interviewer to elicit both. When elementary children talk about their school
experiences, one might expect an attitude tending toward either contentment or criticism.

Because my communication, verbal and nonverbal, with children who were having problems was generally sympathetic rather than authoritarian, I could expect them to reveal less complimentary feelings about their class and themselves. On the other hand, because I was an adult who collaborated with the teachers, I could expect children to want to put on their best face in interviews. Unfortunately, I sometimes slipped into a typical adult persona:

—Although Martha is doing well on a page of rounding decimals, she tells me she does not enjoy it. I point out her success and tell how much I liked decimals as a fifth grader. I have missed the opportunity to acknowledge her feelings, validate them, and build her trust in me. (#25)

Children with whom I had better rapport were probably more frank with me. My techniques for penetrating answers that might not be entirely forthcoming or clear included: asking the same question a second time in different words, in that interview or the second one; pressing for counter-examples (e.g., "Is that always true?"); and pointing out possible self-contradictions.

Interactions With the Teachers

By watching, listening, taking part, and conversing for an entire school year with the people at Southside, especially my two teachers, I learned about the school’s historical background, implicit and explicit aims, methods, traditions, and general expectations. Such knowledge helps a researcher determine the
impact of the broader contexts—the institutional or spatial and the historical—on the classroom (Evertson & Green, 1986). I attended a planning session held by the two teachers prior to the start of the school year and several more as the year progressed. In those sessions, in meetings held at my request, in phone calls, and in informal conversations, the teachers explained elements of their program: routines, structures, systems, unique practices, curricular units, rationales, specific expectations, and so on. We often discussed individual students' personal investment in work—their choices, quality, persistence, intensity, and CM.

In mid-October, in separate sessions lasting between 75 and 90 minutes, both teachers were interviewed on tape. In these semi-structured interviews, I asked questions mainly from a list of tentative ones I had given them in advance. Questions dealt with such things as: the purposes of school; what they expect to accomplish; how to promote student motivation; and the sources of student attitudes toward their work (see Appendix H). I followed up their replies with clarifying questions. The interviews were transcribed verbatim from the tapes via word processor.

To ensure that the expectations developed in our initial discussions would guide the conditions of the study, I proposed a sort of informal contract, a Memorandum of Agreement (see Appendix I). This document consists of statements and brief explanations of the rights and responsibilities that the teachers and I would
agree to accept as integral to the research project. It would ensure (a) that their privacy and trust would not be compromised and (b) that I could carry out necessary parts of the study. Importantly, the agreement acknowledges that differences in interpretations between the professional participants and the investigator may occur. It deals with the potential issues of: (a) the use of data and findings that the teachers might perceive as reflecting negatively upon them; and (b) the teachers’ influence on the final product. It addresses the schedule of research activities, availability of field notes, future use of data, and premature withdrawal from the project. From the start, the teachers agreed in principle to having a written agreement, although the document itself was not actually completed, approved by them, and signed until January.

The relationship between the teachers and me was friendly, casual, mutually respectful, and professional. When they spoke to me of a practice that seemed to be going well or not, I tried to be tactful and supportive in my reply. At first, I avoided making unsolicited observations or suggestions. As the year progressed, the teachers occasionally but increasingly asked my opinions and suggestions about teaching techniques, management procedures, or ways they might help particular pupils. One suggestion they took was to begin the day with a much briefer circle meeting. Gradually I felt more free to make suggestions. Several times they asked me about ways to increase a student’s interest or
participation. In such instances, I generally did not let my suggestions stray far from their usual practice, because to incite major change would be incompatible with my role. I do not recall any instance of their handling a child very differently on the basis of a suggestion of mine. Beyond professional matters that the three of us discussed, Mrs. Gregson and I sometimes shared personal issues, as well. In spite of my amicable relations with both teachers, the Memorandum of Agreement was a worthwhile document, emphasizing to each of us the importance of the jobs we were doing and the consideration each other deserved.

When Mrs. Gregson for personal reasons considered transferring to another school, she checked with me first. She seriously considered staying at Southside if leaving would affect the research adversely. Regrets notwithstanding, I assured her it would not, and on February 15 she left. With a substitute present and later with a permanent replacement, the two halves of the class functioned separately more often and did less mingling. Pupils on the substitute's side became less reliable workers but, on the whole, recovered after a former supervisor who knew many of them took over as their new teacher. Because Mr. Haines was often accorded the leadership role in instruction and planning by his partners throughout the year, the continuity he was able to provide for the entire double class seemed a valid argument for me not to curtail the study when Mrs. Gregson left. Furthermore, by the time she left, my observations were briefer, and I knew the
children well enough to recognize whether changes in their actions were related to the teacher changes. The substitute and the permanent replacement were informed of my role and graciously accepted it. I continued, staying mainly on Mr. Haines's side of the room.

Parent Interviews

Of the eighteen children originally interviewed, the parents of eleven were asked to be interviewed (see Appendix J). Ten consented. Taped interviews were conducted in April and May in their homes. In three instances both mother and father were present; in six instances only the mother was present; and in one, only the father was there. Like those with students and teachers, the interviews were semi-structured, with questions selected from tentative lists that had been sent home in advance (see Appendix K) and follow-up questions that probed their answers. Questions elicited their knowledge on matters such as: their children's interests and CM; home activities that may have encouraged CM; and aspects of school that seem to have encouraged or discouraged personal investment. Questions were also intended to obtain a sense of whether the home was generally an intrinsic or extrinsic environment (Decl & Ryan, 1985). As with student interviews, detailed interpretive notes were made from the recordings, and the tapes were retained during the analysis period for replay as necessary.
Other Sources of Data

**Student logs.** Noss (1979) had each pupil keep a written record of his/her activities, to find out how much time they were spending on science projects, which were considered to be manifestations of CM. They did this by filling out a "time log," a grid with places to check off which of fourteen kinds of activity—for example, science, social studies, recreational reading, family duties, play, etc.—they were engaged in at half-hour intervals throughout the day. There were also places to write more specifically what was being done. The "Activity Chronicle," a variation of Noss's log, was used in the present study to catch CM and other personal investment that might not otherwise be found by observation or interview (see Appendix L). It also became a means of learning about children's preferences and gaining insights into their home lives.

The last Monday in February, amidst curricular activities based on the schoolwide theme of Journeys, I introduced the chronicle to the class, calling it a sort of journey into time. The chronicle pages—enough for two weeks of record keeping—were stapled inside a letter-size manila folder for each child. On another sheet stapled into the folder was a key that listed fifteen possible activities and a one- or two-letter abbreviation for each. To demonstrate, I used an overhead projection of the format of a page. I suggested activities that they might carry on
at half-hour intervals during their time away from school, then I elicited suggestions of their own. Everyone brought their chronicle home that afternoon. I complimented the pupils who returned their chronicles and marked "Yes" on their first page.

The following Monday, the demonstration was briefly repeated and chronicles were distributed. Students were asked to fill them out every day for two weeks, preferably at a regular time. Each morning I collected them, tore out the previous day’s sheet, studied them, and asked individuals for verbal explanations of listings that suggested CM or relevant information about their home environment. It was anticipated that dependability for completing and returning their chronicles would tend to match that for doing homework, which varied widely among pupils. To maximize the quantity and quality of returns, a number of incentives were used:

1. I suggested to the group that several years in the future they could look back at their chronicle as a reminder of what they had been thinking or doing in the past. This was an intrinsic incentive.

2. On the previous Friday and once during the first chronicle week I gave every person a page of jokes, a noncontingent reward (Deci & Ryan, 1985).

3. Points were awarded for returned chronicles: 1 for filling in the activities (the abbreviations) for the
entire day; 1 for adding details; 1 for a parent’s signature. Points were doubled for keeping track on Saturday and Sunday. I posted a chart for each teacher’s class on their respective side of the room, listing everyone’s points and showing the cumulative total for each side. I first portrayed the charts as a competition between the two sides, but there seemed little interest in competing, perhaps because competitive incentive structures (Slavin, 1984) were infrequent in the room and the school. In response, I changed the structure to a cooperative one whereby everyone’s points were totaled, and I challenged them to reach a certain total—neither too easy nor too distant—in order to receive a reward for the whole group.

4. On several days, I announced the names of pupils who had been very helpful by returning their completed chronicles. This was a performance-contingent reward (Deci & Ryan, 1985).

5. On several days, I offered task-contingent rewards (Deci & Ryan, 1985) for pupils who would return completed chronicles. The rewards included use of a computer game, opportunities to see my hobby collections, and an extra recess.

Chronicles were distributed to 23 boys and 22 girls. Of the 650 daily chronicle sheets issued over the 14-day period, 242 or
38% were filled out and returned. Five children, all girls, returned completed sheets every day. Less than five sheets were returned by each of 15 boys and 10 girls. Through their chronicles and subsequent conversations with me, at least 10 children revealed independent activities related to schoolwork.

It is unclear whether any of the incentives improved or degraded the quantity or quality of returns. Pages were completed by noticeably fewer pupils on the weekends. While the incentives met with no objections from the teachers, their extrinsic nature did not further the ideal of encouraging children to do work for its intrinsic value. It is conceivable that pupils who received rewards would become more willing to share their thoughts with me and unrewarded pupils less willing. I did not monitor for possible reactivity of that kind but noticed no blatant instances of it. At the end of the year, the chronicles were returned to the students, as promised.

**Daily journal entries.** In a practice maintained irregularly through the first half of the year, the students were required by their teachers to write daily journal entries on steno pads. I read them for evidence of CM and other personal investment and to learn about their preferences and their home lives. This method was not entirely unobtrusive inasmuch as children were aware that I would read them. Pages marked "confidential" were bypassed, and no children in the study objected to my reading their journal.
The teachers instructed the class on two occasions, without divulging that I had asked them to do so, to include information in their journal entries that related to CM. The day before Christmas vacation, they asked students to write about something they had done at home since September, without being told, that started from an idea they got at school. The first day back from Christmas vacation, the class was asked to write about something fun or interesting over vacation that had started at school. Those entries revealed a number of instances of CM.

**Cumulative folders and interest inventories.** From pupils' confidential files, kept in the principal's office, I collected data about achievement testing, previous schools and residences, past participation in special programs, parental employment, and current address. The teachers also made available to me two sets of documents that had been turned in: an interest inventory completed in class and an information sheet completed by parents.

**Pupils' work products.** Although they did not regularly collect completed papers from the students for checking, the teachers often checked work in progress. Consequently, I did not often examine sets of completed papers but saw the work of individuals as they did it. Sometimes the teachers would hand me a set that they suspected would interest me.

**Videotaping.** Wittrock (1986) cites studies in which students were shown videotaped segments of their class and were asked to
describe what they had been thinking during those segments. As a way of checking the credibility of my interpretations of actions in the classroom, I used videotape to obtain multiple student perspectives. On three consecutive days in the spring, classroom activities were videotaped for several hours. I prepared the students for this event, cautioning that they would not always know when the tape was running and that I would avoid those who played to the camera. For much of the time, the camera and microphone stood on a tripod from where a pan around the entire room could capture a variety of activities. For the remainder, the camera was hand-held, mainly so that I could move in for a closer look at pupils' work.

As I reviewed the tape, I made written note of coherent segments and the children appearing in each. I then asked groups of two to four students—every child at least once—to view segments in which they appeared. In these viewing sessions, lasting about 15 minutes each, I asked them to describe the action as they interpreted it, a process referred to as stimulated recall (Evertson & Green, 1986). Their descriptions, including their confirmations and criticisms of each other's interpretations, were recorded on audiotape. I found that while my interpretations were generally quite accurate, in some instances the circumstances and motives I perceived were not what the children experienced. An example from the audiotape:
--Author: Once you were over there, you were really, really working, weren't you!

Tanya: No, cause I hated it. I was bored.
Rashelle: When she hates stuff, she hurry up and get her work done.

An additional benefit of having groups at these viewing sessions was that the children did not let each other get away with dishonest replies:

--Author: When you were talking, were you bothering each other, or was it work you were talking about, or what was it...

Albert: Yeah, we was talking about work.
Freddy: Hah! You wish!...
Albert: How do you know?
Isaac: I been around you...

Even after many months in their classroom, one must be cautious about interpreting events without triangulation.

**Student questionnaires.** At the end of the year, in addition to the questionnaire seeking their perceptions of the observer, the students completed two other questionnaires. One, entitled "Questions About Class," asked for opinions of certain conditions and requirements in the room (see Appendix M). It also sought evidence of CM stemming from two of the year's more unusual class activities. The other questionnaire, entitled "About the Science Fair," asked what their feelings had been while doing a project and whether they continued to be involved with their project or anyone else's after the fair (see Appendix N). The approach of this questionnaire was similar to the retrospective questions posed by Dodge (1986), referred to in Chapter Three.
Co-observation. In the spring, a young man in his senior year of high school and a young woman in her senior year of college spent considerable time in the classroom as part of their pre-service training. Both were serious and competent at their work and sensitive to the children. One afternoon in April, the two carried out a co-observation with me. The high school senior carried out a second co-observation with me one morning in May. The plan of these sessions was for us to observe the same lesson led by Mr. Haines and the pupil work time that followed, for approximately an hour. To ensure that our objectives and foci would be quite alike, each observer was given a sheet of guiding questions (see Appendix 0). They were also given a blank sheet for note taking. My co-observers were not in a position where they might have felt obliged to satisfy either me or the teachers with "appropriate" or "correct" interpretations (Harris, 1968). The teachers seemed to respect their opinions, and I explained to the teachers that I was looking for other views so that I might find anything outlandish in mine.

Afterward, the co-observers and I discussed our interpretations of what we had observed. The qualities of the actions and relationships each of us noticed were quite similar. It seems clear that our differences resulted mainly from our different abilities to hear what one student or another had said (due to our different locations about the room) and from our different awarenesses of contributory situations. Where our
interpretations diverged, they did not conflict but seemed complementary; that is, we agreed that each other's was plausible.

Analysis of Data

Analysis in Terms of the Research Questions

The primary analytic problem posed by the research questions was to identify instances of CM. When CM seemed to have occurred during an observation, the analytic job was to compare the content and form of the resumption to those of the original task, determine their proximity in time, and attempt to learn what circumstances and incentives seemed to be present. When CM became apparent after the fact in a student interview, analysis began by my choosing questions that would get at those same characteristics. Analysis was enhanced insofar as I was able to choose parents to interview and ask them questions directly related to their son or daughter's answers. The answers given by children and their parents were considered each in light of the other, as well as in relation to data from other sources such as journal entries.

To determine the influence of personal experiences on students' CM and other personal investment, the process of analysis entailed forming interview questions asking about the origins of specific task resumptions. It also entailed judging
the likely importance of the origins that were suggested in answer to those questions, and seeking similarities and differences in those origins across tasks and across pupils. To determine what characteristics of the instructional environment and tasks might be contributing to CM and other personal investment, analysis likewise involved seeking similarities and making judgments of their importance. A list of working hypotheses about characteristics that seemed to promote or to hinder personal investment was gradually developed.

**Coding of Categories**

Strauss (1987) holds that variations in the analytic methods of researchers who wish to extend extant theory are justified by the "diversity of social settings and their attendant contingencies." Researchers have "different aims...different investigatory styles...[and] different talents and gifts" (p. 7). According to Merriam (1988), because case studies are sensitive to their context, they have no set protocols. Glaser and Strauss (1967) devised a method called constant comparative analysis, in which the investigator codes (places) similar incidents together in categories, develops general descriptions ("theoretical properties") of the categories, modifies the categories as different incidents are added, and looks for relationships among categories. The method is meant not as a prescription for microscopic details but rather as a guide to analytic process.
The analytic process in this study was similar but not identical to the constant comparative method.

Field notes were analyzed during and after the nine months of observations. Initial analysis occurred in situ each day while observations were being recorded. Alongside the field notes I wrote remarks on the relationship of events to theory, as well as tentative, inductively derived categorizations. After each day's observation, the notes of the day were reviewed and further remarks added, including objectives for the next day.

After a day's notes were entered in the word processor, analysis continued. Searching through each day's transcript on the screen, I discerned circumstances and occurrences that seemed to be significant and compared them with my prior understandings and expectations and with circumstances and occurrences noted on previous days. From differences and similarities that I perceived among them, conceptual categories emerged. That is, I perceived certain themes, or patterns. This was an inductive process: seeing the general in the particular. Wherever a segment in the transcript—a phrase, sentence, or paragraph—seemed to contribute to a pattern, I inserted the name of the category as a heading above the segment. The earliest list of categories, compiled in the first weeks of data collection, resembled an early stage of the decision-making technique known as brainstorming. That is, no category was excluded for being incongruous, and most were given
equal weight or importance, with very few designated as subcategories of others. Thus far, the process resembled what Strauss (1987) describes as "open coding."

Open coding evolved into "selective coding" (Strauss, 1987). As analysis progressed during the time of data collection and beyond, I combined categories that seemed to be similar. I recognized some as being subcategories (aspects, characteristics, examples, properties) of others. As I did further theoretical reading and reviewed literature previously read, I became more convinced of the importance of the antecedent conditions and components of meaning set forth in Maehr's theory and the attributes of intrinsic motivation posited in Deci's theory. Categories were added and others refined to reflect the theoretical orientation. Categories that did not seem theoretically promising or were based on data that seemed inconsequential were dropped. The list became a coherent outline. Contrary to the suggestion of methodological literature (Glaser & Strauss, 1967; Lincoln & Guba, 1985), observations did not cease with saturation of analytic categories. Instead, they continued in an effort to discover more, different instances of CM.

A drawback of the Appleworks software on the Apple IIe computer was its insufficient database management capability, hence my use of its word processor only. Using manual categorization, a segment of data was usually placed in one or two
categories that seemed most appropriate. Few were assigned to multiple categories. A capable database management program could have facilitated the placing of data in all appropriate categories. Refining and consolidating categories could have been facilitated, as well. A database file could have been created for each category and, indeed, for each child.

Trustworthiness

In interpretive epistemology, standards of rationality and norms of inquiry are intersubjective, established by and open to criticism by communities of inquirers (Bernstein, 1976). In the present study, certain practices have been employed to ensure that the processes of data gathering and interpretation are carried out in ways that meet generally accepted standards and are therefore trustworthy. In accordance with criteria set forth by Lincoln and Guba (1985) and now widely agreed upon, procedures have been followed in this study to assure that what I have interpreted to be the findings of the study are credible and transferable. Procedures for meeting the criterion of dependability, described by Lincoln and Guba (1985) and Merriam (1988), have also been followed. A fourth criterion, confirmability (Lincoln & Guba, 1985), calls for a complex process of auditing the records of the inquiry. Rather than do that, the reactivity (Lincoln & Guba, 1985) and subjectivity (Peshkin, 1988) of the investigator, both
concerns related to confirmability, are documented. There is, in addition, a criterion of ethical action (Bogdan & Biklen, 1982), or respect for participants.

Credibility

The central problem of interpretive approaches to social science research, as Smith (1984) sees it, is the absence of certitude. Acknowledging that certitude is not possible, Lincoln and Guba (1985) recommend procedures that contribute to the credibility of a study. These procedures are not meant to eliminate a large proportion of interpretations, thereby showing that only interpretations x and y are adequate; rather, they are meant to eliminate interpretations that have not had the benefit of a minimum of reflection in common sense ways. To establish credibility in this study, the design includes persistent observation, prolonged engagement, triangulation, search for counterexamples (which is analogous to Lincoln and Guba's negative case analysis), and member checking (Lincoln & Guba, 1985).

Persistent observation of particular activities such as field trips and science fair projects enabled a better understanding of them and more knowledgeable speculation about their role in personal investment. The school-year-long engagement on site was important to provide perspective across changes that occurred in the instructional environment, such as when the schedule was altered and the room physically rearranged at the start of new
units. In addition, the length of engagement partially compensated for a somewhat diminished ability, resulting from the computer-related delay in transcription (noted earlier in this chapter), to modify the focus and design from day to day. Promising threads that were not picked up immediately could be discovered later.

To improve the probability that findings would be credible, the design included triangulation of sources, methods, and investigators (Lincoln & Guba, 1985), checking them against each other. For verification and extension, data collected in student interviews was compared with interview data from their parents, teachers, and occasionally their peers. Triangulation was facilitated by the variety of methods of data collection. Data from interviews often overlapped with data obtained through observations, conversations with pupils and teachers, journal and chronicle entries, cumulative files, and questionnaires. Triangulation was also obtained by recruiting two persons to observe in the classroom and compare their interpretations with those of the researcher.

As data led to the formation of working hypotheses about the relationship of classroom or home circumstances to CM, counterexamples and other disconfirming data were actively sought by way of questions such as the following:
Did children manifest CM or other personal investment in the presence of circumstances that had initially seemed to hinder it?

Did children manifest CM or other personal investment in the absence of circumstances that had initially seemed to promote it?

Did CM occur in children in whom I detected little or no sign of being "turned on" by school activities?

Was CM absent in children who demonstrated other forms of personal investment in by school activities?

Member checking is the testing of facts, working hypotheses, and findings with the participants from whom the data were collected. I reminded the teachers several times, including in the Memorandum of Agreement, that my constructions were not necessarily going to agree with theirs but that by knowing theirs I might improve my own. Constant touch was kept with the teachers. Preliminary findings were checked with them, and summative findings, as well. Preliminary findings were discussed with the principal. Students discussed with me the motives of their actions in the videotaped segments.
Transferability

The conclusions of the research are products of the interaction of the particular context studied and the person who studied it. They are not generalizable by statistical means from this case to a certain population as though it represented that population in an abstract sense. The children, the teachers, the subject matter that the class studied during the period of observation, and the forms in which that content was presented were unique to the class being investigated and unique to the particular school year. The reasonableness of applying the findings to other places, times, and persons relies in each instance on the ability of the reader to find in the details herein a sufficient similarity to his/her own understandings of contexts with which he/she is familiar. To provide a sufficient basis for judgments of contextual similarity, the portrayal of instructional environment in this study has been thickly descriptive (Lincoln & Guba, 1985; Erickson, 1986).

Dependability

A determination of whether a researcher's interpretations in a study are dependable, or consistent, can be based on: (1) an exposition of information about the researcher's assumptions, relationship to the participants, criteria for selection and description of focal persons, and the social context in which the data is collected; (2) triangulation; and (3) rigorous description
of the data collection and analysis and the reasoning process that determined each (Merriam, 1988). I have gone to considerable length to carry out and describe these components in the study.

**Reactivity**

Interpretive researchers see themselves as part of social functioning and unable to rise above it (Carr & Kemmis, 1986). Indeed, it is preferable to exploit rather than try to eliminate interactions between investigator and respondents. The role of the interpretive investigator toward the people and context being investigated is not neutral and aloof; all are mutually shaped (Lincoln & Guba, 1985), or in other words, reciprocally determining (Bernstein, 1976).

The classroom in the present study was very large, with some fifty children and two teachers present, two others visible over the bookshelves, and parents and university students sometimes moving about. In that milieu, my presence probably did less to alter relationships among the participants than it might have done in a more conventional classroom of fewer students and a single teacher (Bogdan & Biklen, 1982). Nevertheless, there were children who tended to focus on me and depend on me for attention, help, and acknowledgement. Insights into my influence on students' behavior, as revealed on an end-of-year questionnaire, have been summarized in a previous section.
Contact with the investigator certainly promoted some personal investment by students and nurtured the teachers' valuing of CM. For instance, with Patrick wearing a plaster cast on his finger, I brought another cast from home and encouraged him to write about either one. I invited Caroline to phone a pet shop from the office, to answer a concern she had about the guinea pig. I learned from Margaret's mother that during the first week of chronicling activities every half-hour, her daughter watched less TV than usual, possibly so she could record activities that I might value more highly. I infer from this clue that she was probably not the only one whose actions were influenced by the chronicle. Reactivity that occurred as increased personal investent from incidents such as these does not detract from trustworthiness of the research. First, the quantity of motivation in this classroom is not at issue; and second, any important instances of contact are described in the text.

Reactivity was evident in the contrasting ways in which the two teachers dealt with my presence, especially when they were making presentations. Mr. Haines seemed to background me—that is, to pay no attention to my presence. Mrs. Gregson seemed more often to foreground me, glancing and occasionally commenting to me while she taught. My interpreting her response as mild discomfort contributed to my tendency to spend more time observing in Mr. Haines's vicinity.
Clarity of Subjectivity

Realizing that one cannot be objective in the investigative role, it is necessary to be aware of one's subjectivity. Peshkin (1988) describes how in doing observational research, contact with the site and the phenomena being studied may bring out some of the one's personal values and preferences. "These qualities have the capacity to skew, shape, block, transform, construe, and misconstrue what transpires from the outset of a research project to its culmination in a written statement" (p. 17). Despite trying to be open to what the participants mean by their words and actions, researchers are bound to be influenced by their own preferences and values. One's subjectivity, says Peshkin, cannot be overcome, but it can be "tamed."

I have striven in Chapter One to lay out my assumptions about the nature of knowledge, preferences in regard to children's and adults' work, and personal history that led to my selection of the research topic. Still, Peshkin's notion presents an opportunity to reflect upon ways that my subjectivity may have influenced my interpretation of what I observed. Each personal quality or preference that may emerge in the course of an investigation is characterized by Peshkin as an "I." One's "Gender Equality I," for example, might influence one's interpretation and portrayal of how girls are treated in a classroom being studied.
This relatively lengthy section is the result of reflections upon the "I"s that may have influenced my interpretations and portrayals as I have observed, taken notes in, and written about Room 9 at Southside Elementary School. The "I"s are preferences as to the way classrooms are conducted. Some of the preferences may seem rather restrictive or traditional, while others may seem in contrast to reflect an openness to students' actions, ideas, and feelings. The intent here is not to explore their consistency but simply to identify them and their possible tinge in the research.

Whether participants are aware of the researcher's preferences depends upon how close the association between the parties and how open the the researcher is about them. (The matter of what degree of openness may be appropriate, profitable, or ethical is beyond this discussion.) Some of my biases were evident in the nature and conduct of my research. So as not to exert undue influence on their practice, I tried to refrain from offering my opinion when not asked and from expressing it very strongly when asked. The teachers felt I was relatively open with them.

By mentioning my attitude toward particular conditions and practices, I am not suggesting that they are a basis upon which the teachers in the study should be evaluated. Quite the opposite. I make no attempt here to indicate how often actions
might have occurred or in what contexts. Rather, I am suggesting that the reader be alerted to colorations that may exist in my interpretations and portrayals of the teaching-learning situation in subsequent chapters of this study.

Much of what I perceive in schools passes through a filter that might be called my "Orderly Environment I." This aspect of me values a classroom that is orderly with respect to actions as well as physical conditions. It is an environment in which children are concerned about meeting behavioral expectations of them, and they respond expeditiously to instructions and signals from teachers (and to sanctioned signals from colleagues). The levels of noise and movement do not make it difficult for pupils to concentrate. Children are routinely careful not to harm each other's work, property, feelings, and bodies. They take care not to damage equipment or to waste materials. Cleanliness of the room is maintained, things are put back when their use is finished, and the floor and surfaces are picked up after use. Adults attend to children's cleanliness, hygiene, and proper clothing.

This "I" tended to be critical of the teachers when they were either unaware of or unwilling, on the spot or afterward, to confront individuals or groups who seemed to be more engaged in socializing than in their academic tasks at hand. This "I" felt ill at ease when the level of noise or the amount of movement
seemed unnecessarily high. This "I" was disturbed when materials carelessly dropped were allowed to remain, resulting in crayons and paints ground into the carpet, pencils broken, papers soiled with shoe prints, and valuable materials ending up in the custodian's refuse can. On the other hand, this "I" was pleased to see students given responsibility for regularly carrying out jobs without being told.

The "Rich Environment I" prefers that there be a wide variety of materials and activities available for pupils to choose in all academic and artistic areas. This "I" combines with the previous one to support my belief that a rich selection of activities coupled with a minimum of disruption to instruction and study enables a teacher to gather evidence about and keep track of individual children's needs and evaluate their progress. In Room 9, this "I" was impressed with the diversity of tasks at which pupils worked and their many field trips. This "I" was at times unsure of the teachers' ability to stay clearly aware of everyone's needs and progress. This "I" identified with Mrs. Gregson's concern that some direct instruction be offered to pupils who had not picked up certain reading or math skills important to their continued progress.

The "Individual Learner I" cringed when tasks that seemed appropriate for a pupil to do alone seemed to be complicated by too many cooks working together. Cooperation may make a task more
palatable, create intellectual synergy that enriches the experience, and encourage pupils to take aspects of the work further than they might otherwise. But there are occasions when learning a particular fact or skill is a justifiable objective. One can only learn for oneself. When a task that one person seems able to handle with little difficulty is divided between two, each might be deprived of part of the benefit. Sharing the task may actually prevent some participants from attaining the objective.

My "Model Teacher I" values when a teacher: (a) speaks to students with clarity, accuracy, and sensitivity of tone; and (b) perceives both the factual and emotional content of students' messages. This "I" could become aroused when a teacher seemed unsuccessful at explaining a concept in a way that all the children might understand it. This "I" was disturbed when teachers misspelled and mispronounced words. It was assuaged when a teacher seemed to be "in touch" with a child's feelings about a task, a relationship with peers, or a problem outside of school. The "Model Teacher I" contributed to my tendency to devote somewhat more attention to activities under the auspices of Mr. Haines than of Mrs. Gregson. On balance, I saw in him more personal qualities and teaching characteristics that reminded me of what I like in myself—for instance, the way he related to some of the less cooperative boys, his enthusiasm for innovation, and the fact that he was a male.
The "Real Inquiry I" feels that doing research reports is very valuable, particularly when pupils investigate topics of their own choice. This "I" felt good when pupils were encouraged to ask questions or to follow up their questions by doing their own research. It was warmed when a teacher would show genuine enthusiasm over a pupil's interest. It was offended when factual oral or written reports were accepted with little criticism even though they showed little understanding of their topic.

The "Don't-Interrupt-Kids'-Work I" is concerned that when children consider a piece of schoolwork important enough to persist at it, interruptions by adults for unimportant cause are disrespectful. Such interruptions include making announcements to the class and calling aloud to pupils rather than going over to them or quietly beckoning to them when others are working. This "I" was quite satisfied with the respect shown by the teachers and principal to pupils at work.

There is an "Anti-Institutional I" sensitive to conditions and occurrences that are common in schools and quite unique to the institution but lacking in useful purpose. This "I" notices a certain kind of "teacher talk"—uncomplimentary statements that are uncommon outside of school: "You didn't listen to directions," or "Your hand wasn't raised." This "I" objects to making a classroom a hard environment without soft places: sofa, carpet, curtains, stuffed animals, nooks to squeeze into, soft
lighting, etc. This "I" was pleased that there was a couch in the corner of the room, then saddened when it was discarded. Going beyond the walls of the school building on field trips was something that stood favorably with this "I".

Peshkin (1988) acknowledges having a "Nonresearch Human I," a feeling of cameraderie with participants that extends outside of the research situation. It is an "I" that "softens one's judgment" (p. 20). I experienced this "I" when faculty members invited me to get-togethers, when the principal and I talked about our vacations, and when I agreed with the unusual values of one student's father.

In doing the present research, I have sometimes been aware when my values and preferences about the schooling process have affected my perceptions; sometimes I have not. When I have noticed them, I have not denied them. I have tried to recognize their influence and to keep them from "mut[ing] the emic voice" (Peshkin, 1988, p. 21). As Peshkin (1988) has said, awareness of these "personal qualities" can at best "unshackle" a researcher from their intervention in the research process; it can at least help the researcher disclose where they may have emerged. In this section it has been my intent to make such disclosures. It is hoped that by knowing these "I"s, the reader will be better able to understand my interpretations and judge their applicability to a familiar context.
Respect for Participants

Beyond ethical issues covered in the university's human subjects review process and matters such as informed consent, confidentiality, and honesty of reporting (Bogdan & Biklen, 1982), I proceeded in ways that showed respect for the participants. The Memorandum of Agreement (see Appendix I) with the teachers embodied this respect. I was always open to the opinions of the teachers. They were, in addition, given specific opportunities at several junctures to express their opinions about my interpretations, those close to the data and those based on a higher level of inference. I trusted their comments, took them seriously, and in several instances modified the text to incorporate additions or clarifications they suggested. Although I was prepared to reconsider any of my understandings that might draw severe criticism from the teachers, in fact there was none.

To make teachers and parents less apprehensive about interviews, I gave them a tentative set of questions at least a day in advance. To be respectful of children is to be responsive to their needs. As an experienced teacher who enjoys working with children and seeing them flourish, I was responsive to them. Respect for them was shown in ways such as being careful not to interview at times that would interrupt eagerly anticipated activities, returning their activity chronicles to them at the end, honoring requests not to interview their parents, helping
those who were not part of the research, and giving everyone an opportunity to learn about and use the video camera after my taping was done.

Summary

After Chapter Two described methodologies used in previous research in CM, Chapter Three has detailed the methodology used in this study. Here, I have laid out: (1) the epistemological assumptions on which the methodology is based; (2) the research design; (3) the data analysis procedures and rationales; and (4) ways in which the methodological practices have assured that the findings warrant the trust of the reader.

The discussion of epistemology deals with the notion of interpretation and the importance of the view from the inside and outside. The exposition of the research design explains the case study approach, details the various data collection methods, and describes the character of my interactions with participants. The section on data analysis deals with thought processes that occurred and with the coding of data. Finally, trustworthiness of the findings is defended in terms of several criteria, with particular effort to shed light on the character of subjectivity in the observations.
CHAPTER IV

CONTEXTUAL DESCRIPTION OF THE INCIDENCE OF CONTINUING MOTIVATION

This chapter responds to the first research question posed in Chapter One: In what ways do these students in this class manifest continuing motivation? The chapter begins with a portrayal of the school and of a typical day in the classroom that was studied. Then, brief characterizations of schoolwork by subject area are followed by descriptions of instances of continuing motivation in each area. The chapter concludes with a discussion of personal incentives that were evoked by the incentives inherent in the tasks and events of the classroom.

As noted in Chapter Three, statements in this and subsequent chapters referring to observations made on specific days are keyed to field notes by a numeral in parentheses, (#1) through (#106). All quotations taken from taped interviews are printed verbatim. Quotations taken during observations are reproduced as accurately as possible but are in most cases paraphrases. To avoid complication, they are punctuated with quotation marks nonetheless.

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The School

A public school that I shall call Southside Elementary School serves about 325 children in a large city in Ohio. The modern building, a single story and practically windowless, houses kindergarten through grade 5. The building and its substantial grounds take up most of a city block in an old residential neighborhood, not far from the downtown. The property is bounded by a main thoroughfare on one side, two residential streets, and a row of tall old homes. The playground has plenty of grass and asphalt for the whole school population, with equipment at opposite ends, a caged basketball court, and a small area shaded by trees.

Southside is an "alternative" school in that: (a) it identifies itself with certain curricular features that are not common in its district; and (b) part of its population attends by choice, on the basis of a lottery, from other areas of the city.

Southside’s population is comprised 43% of African-Americans and most of the rest Caucasians, with a very few students of other racial identities. There is no one with a visible physical handicap. About 60% of the children come from the local community surrounding the school. It consists essentially of old housing, but in numerous sectors houses are being refurbished, and some have been restored to elegance. Gentrification is occurring. Consequently, of the local students, some come from homes of
relatively low socioeconomic status and others from middle-income homes. The neighborhood is predominantly Caucasian, though not to an extreme. Children bused in to achieve racial balance are mainly African-American, from low and lower-middle income homes. Children who have entered via the lottery are of various races and socioeconomic backgrounds.

The list of alternative curricular features that set this school apart is headed by international studies. This emphasis means that foreign countries are studied in every grade in an effort to promote the understanding that many cultures exist today and that some have special relevance to members of the student community and their families. Some faculty members have traveled abroad and made contacts with teachers in other countries. A "whole language" program utilizing a variety of reading materials other than basal readers integrates literature into the content areas. An "open concept" means that: (a) many instructional spaces are open to each other; (b) teachers enact various forms of teaming; (c) the classes, referred to as "learning communities," are comprised of children of mixed ages; and (d) within the communities flexible instructional groupings are made feasible by broad interpretation of the district's grade-level-specific curriculum objectives.

A sign in the teachers' lavatory reminds them: "At Southside we encourage mutual respect and understanding, open communication,
trust, cultural diversity, risk taking, self-discipline, and shared leadership." It is meant to apply to adults and children both. Efforts to stress peacemaking and acceptance of human differences are noticeable in schoolwide and classroom activities and approaches. The disciplinary and competitive sense one might expect in physical education is replaced by a program of movement education, in which physical and cooperative skills are built in an egalitarian atmosphere. As an extension of that program, fifth graders are trained to lead organized outdoor activities for their peers and younger children each day. Thus, the ubiquitous lunchtime recess has become "community games" period.

Field trips are encouraged as a major element of the instructional program. The usual destinations such as museums, municipal buildings, and musical performances are visited more often than by most schools. The local forays are supplemented by trips to distant cities, some involving overnight stays, and outdoor education camp for all grades, including kindergarten. Schoolwide fairs, holiday assemblies, and participation in citywide festivals speckle the calendar. In addition to many local persons and groups called upon to speak or perform, the school hosts foreign guests and a nationally known children’s author each year.

Of the instructional personnel who normally attend staff meetings, about 60% are Caucasian, about 40% African-American.
The mean age appears to be between 35 and 40, with one first-year teacher and one who might be characterized as a venerable veteran. Among them the lines of communication and kinds of cooperation are varied in strength and quality.

The "arts team" of four teachers--music, art, drama, and dance--swoops in every other week. Besides teaching their own skills and appreciations, they extend the curricular emphases of the classrooms and contribute richness and festivity to special events. The library, in the middle of the building and open to both main hallways, is well-utilized by individuals and groups. The atmosphere there is airy and colorful, with friendly supervision of a full-time child-oriented library aide whose own children attend the school.

The principal, whom I shall call Nate Barnett, is a tall, imposing African-American man whose corn-rowed hair speaks racial pride. He is a soft-spoken, gracious person with substantial elementary teaching experience who relates well with the children. At assemblies he quickly draws their attention without fuss and similarly re-establishes decorum if it slips. When dealing with children who have behaved in seriously inappropriate ways, he is firm yet reasoned. Now in his third year at Southside, he has spearheaded the development of the program, gradually acquiring faculty members supportive of its main premises. Teachers and parents have been generally heard to speak positively of Mr.
Barnett. Teachers and pupils seem to welcome him into their rooms, although other job pressures keep his visits infrequent.

Overview of the School Day

The following is a sequential description of the activities of a typical school day for the participants in this study:

It is the midst of the school year, perhaps early November. Children arrive by bus, by car, and on foot. The day at school starts for many in the multi-purpose room with a subsidized breakfast. High ceiling and painted cinderblock walls make the acoustics horrendous, but the dozens of breakfasters are moderate of voice and the atmosphere rather calm. They carry their breakfast packet of dry cereal and juice to a bench attached to one of the long, portable tables and sit down to eat. Miss Dixon, a second grade teacher, is on breakfast duty most every day. She seems quite at ease as she eats with them, finding no reason to raise her voice.

From breakfast the children go outside to join others for a few minutes of play on the asphalt or grassy areas of the large playground. There are no bells, so at nine o’clock a child swings a large flag like a semaphore, signaling all to line up by class. The teachers arrive to escort them inside.
The lines of the younger children are quite straight, those of the older children more raggedy, as they walk down the carpeted hallways flanked mainly by movable partitions—the floor-to-ceiling variety that have a look of permanence and were made to take staples and tacks. One group after another peels off through wide openings into their classroom areas.

Two teachers, whom I shall call Ron Haines and Nellie Gregson escort their respective classes to a very large classroom area, actually two adjacent rooms undivided by wall or partition. Each of the two teachers is assigned about twenty-six children—third, fourth, and fifth graders. Some are in their third year with the same teacher. While nominally members of Room 9A (Gregson's) and Room 9B (Haines's), the two classes intermingle for much of the day and are together designated as the Room 9 Community.

Their area is actually half of a four-room cluster. In the other half resides another community—two second-third grade classes. The communities are set apart by an arrangement of bookcases, cabinets, and teachers' desks. Although the teachers are quite friendly and the communities quite visible and audible to each other, they work separately.

The room is bright with fluorescence but windowless except for two fixed panes, tall and narrow. The furniture consists mostly of tables that seat three to six children each. Chairs are still stacked on them from yesterday afternoon, when the carpeted
floor was vacuumed. The carpet is utilized as workspace, and wooden lap boards are available for pupils who need to write or draw there. A sofa and several carrels serve as "timeout" locations, where students who have disturbed the proceedings can be temporarily separated from the others. Several six-foot-tall movable cases stand on casters, mostly around the periphery of the room. Some of these are cabinets full of books and materials; others have open shelves and cubby holes for each pupil's tote tray. The room will be rearranged several times as the year progresses.

There is a counter with sink, running water, and paper towels at either side of the room. Lavatories are off both hallways nearby. There are four Apple computers, two with printers. Some fish swim in a filtered tank. A guinea pig occasionally whistles from his plastic tray. Hermit crabs are crawling in another. Much of the wall space and even some chalkboard space is covered by students' papers and art; teacher-made diagrams and lists; colorful, laminated pictures from National Geographic; and commercially produced pictures and charts.

Children saunter, bluster, and straggle through the wide "doorway" at the east side (Mr. Haines's side) of the room. Several walkers enter through the opening on the opposite side. Near the entries Mrs. Gregson and Mr. Haines stand for a short while, giving brief greetings. Early in the year, a parent or two
were often present to observe for awhile or help prepare materials. Later in the year there will be college observers and student teachers. Pupils who know them say hi or chat with them.

Coats are hung in corners at both sides of the room. Whatever has been brought from home gets stashed in the tote trays. Mr. Haines reaffirms out loud the usual procedure to form a "circle" on the carpet near the center of the room. Mrs. Gregson no longer has to remind them to stop at the pocket chart to turn their card (from white side to yellow indicating they are present, and up or down indicating whether a lunch is to be ordered). She sits down at a table with the attendance and lunch list, as he pulls up a chair among the fifty-some boys and girls who are sitting in various positions on the carpet. (Often he will do the attendance while she leads the circle.) Mr. Haines prods someone who is dawdling, greets another, and compliments several who are sitting quietly. He doggedly reminds a predictable few who have chosen to sit too far away or in chairs to join the group. They register their complaints verbally and nonverbally.

Mr. Haines welcomes the group and proceeds to describe the day's activities, pointing to each on the flip chart he prepared earlier this morning. The schedule varies somewhat each day, due in part to arts, movement, remedial instruction, and other special programs for which individual pupils or half the class may be
called away. Some days the circle lasts half an hour or more. Today it runs about fifteen minutes. The business and conversation complete, the students are directed to go to the area where their first work is to occur.

A description of a usual day's activities follows. It concludes with a list summarizing the hypothetical schedules of two students. To classify a given class period as being devoted to a single subject may be inaccurate, however, because the tasks are often meant to integrate different kinds of knowledge rather than compartmentalize them.

Other than having to be in a general area for a lesson being taught, pupils are free to choose where and with whom to sit during the school day. Seating is assigned only for occasional circumstances, such as for a substitute teacher or when the group has been particularly volatile.

A math lesson is likely to be the day's first academic activity. During most of the year, the class is divided into two large groups for math. A grouping normally holds for several weeks, until a new topic is begun. Groupings are not determined by grade level but by informal written assessments, most of which were given early in the year. Each teacher meets one of the groups on what is nominally his or her side of the room. The topics in the two groups may or may not be the same. The duration of the lesson and the instructional sequence vary with the topic.
The teachers use their chalkboards or pull up a small one that resembles an easel. Today Mr. Haines's group is seated on the floor, Mrs. Gregson's at tables.

Mr. Haines introduces the lesson, which today is on how to solve "word problems," in a rather conventional manner, eliciting a small amount of student participation. Then, he calls upon a few individuals to reason out the parts of a solution and give answers. He next gives several exercises to be done right there, encouraging pupils, as he and Mrs. Gregson commonly do, to work in pairs or groups of three or four. He then picks several pupils once again to share their reasoning and their answers with the group. Further exercises are assigned. Students who do not finish in the time remaining, perhaps fifteen or twenty minutes, are expected to complete it later in the day or at home in the evening.

A writing activity is usually the next order of the day. Today, Mrs. Gregson has set up small groups on her side for simultaneous handwriting instruction, practice, and diagnostic testing. On the other side at the east wall, a table of writing materials and some posted instructions denote the place where the teachers, usually Mr. Haines, hold "writing workshop." Typically, he raises a concept or issue that relates to their current emphasis in social studies. He elicits thoughts and opinions from the children then proposes a form in which to express them--a
story, a letter, a report. After making and eliciting a few more suggestions, he reminds the group of the prescribed composition process they have been taught: rough draft, revision, editing, and final copy.

They begin without collaboration to write their rough drafts. For revision and editing, they are required to work with a partner. Final copies are written individually, using "good" paper with black pen or one of several word processing programs available on the computer. The teachers circulate to give assistance, meet with individuals about previous work, or pull out small groups to discuss their assigned literature readings.

"Signals!" Mr. Haines announces, with one hand raised and fingers in a V-sign. Most pupils return the sign, and he reminds the class to keep their voices at a reasonable level. Several days are allotted for completion of the writing process: during writing workshop time, in afternoon work time, or at home if a child so chooses.

In a few days the two halves of the class will reverse roles. Although the grouping for writing has been flexible so far, it will remain constant and take on a somewhat different flavor during the second and third quarters of the year. Mr. Haines will follow a pre-designed, foundation-sponsored instructional program, which I shall call Luminaries, that integrates art with writing and stresses poetic expression. The program includes field trips,
hefty sketchbooks, and a visiting poet. Students who wish to join will be accepted, and the remaining slots will be given to other students whom the two teachers feel might benefit most. Mrs. Gregson will continue to do writing activities with those not in the program, naming her group the Beacons.

Children who have finished this morning's writing task may immediately get their individual journal to make a daily entry. Pupils still working at the task have to put it away and make their journal entry before 11:15, at which time "readaloud" is the last activity before lunch. Both teachers read but from a different book. Each pupil has chosen which one to attend and sticks with it for its duration, usually two or three weeks. Sometimes a readaloud group is replaced by "author's chair," in which students read their own writing out loud and comment to each other about it.

Several pupils leave readaloud early to distribute hot lunch packs throughout the school or to lay tablecloths around the classroom. When the reading is over, others leave for lower grade rooms where they will assist the teachers by eating with the "little kids." This year, all classes eat a congenial lunch in their own room, avoiding the high-decibel frenzy or forced silence common to school cafeterias.

On nice days, lunch is followed by community games outside with the rest of the school. At any given time about ten pupils
from this class are leaders; the others are players. When the weather is bad, board games and math paraphernalia usually come out in the room. Games are followed by a half hour of silent reading. This is the only academic activity set simultaneously schoolwide, and it is strictly enforced by all teachers.

After silent reading usually comes "work time" or "web time," during which pupils work from a menu of perhaps a dozen tasks--required and optional--pertinent to the current theme in social studies and science. Certain tasks require resources such as a book, a map, a balance scale, or one of the animals. Some of these resources are organized at several "centers," temporarily specified work areas--a table, a counter, a shelf--dispersed about the room. Working in pairs and small groups is, by and large, encouraged. The teachers again circulate and briefly meet with individuals or groups for status checks. Deadlines range from the same day to several weeks hence. At times, work not finished in class is to be completed at home. Individuals who have finished the tasks that are due today or tomorrow are generally expected to carry out a standing task such as continuing their "official reading book," the piece of literature assigned as part of the thematic study; continuing a book of choice; answering questions in the "reading log" about the book most recently completed; or doing a small project--a "reading extension"--about that book.
Shortly after three o'clock, the class begins to prepare for departure. They meet in the circle so that the teachers can point out the strengths and weaknesses of the day and elicit evaluative remarks from students. There are reminders about things to bring in: assignments, objects, monies. Each pupil has a job to do now, such as straightening bookshelves or feeding an animal. Bus pupils walk down to the multi-purpose room where they sit on the floor in lines and wait for their respective buses. The aide in charge there occasionally raises his voice to maintain near-silence. A teacher and Mr. Barnett assist. The atmosphere does not seem oppressive or the children resentful; anyhow, they'll leave in a few minutes. The walkers depart the classroom. Parents, siblings, and friends await them in the lobby and out on the sidewalk.

Mrs. Gregson will collaborate with Mr. Haines until early February, when for personal reasons she will leave Southside to teach elsewhere in the district. There will be some disruption to the program for about a month, with substitute teachers taking her place. But the man who eventually takes over is a former supervisor, skilled and committed to the program, who already knows Mr. Haines and many of the children.

Different daily schedules. Many other activities besides those referred to above occurred on various days. While the teachers tried to ensure that students experienced every academic
subject each day in a presentation or seatwork, in practice this did not always occur. There would often be distinct differences in a student’s schedule from one day to the next. Variations were due to such things as arts classes, guest presentations, the approach of targeted culminations of class projects in major thematic studies, and individual students’ completion of task requirements.

In Table 4 are the hypothetical schedules of two pupils. The first example represents a relatively uneventful day. The second is an arts day schedule for a pupil who is a daily lunch helper, attends the remedial program regularly, and on this day has a periodic leadership meeting.
## Table 4

**Two Hypothetical Student Schedules**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>circle</td>
</tr>
<tr>
<td>9:30</td>
<td>math—teacher presentation, seatwork, go over seatwork</td>
</tr>
<tr>
<td>10:15</td>
<td>writing workshop—teacher presentation, seatwork</td>
</tr>
<tr>
<td>11:00</td>
<td>literature—small group discusses assigned book with teacher</td>
</tr>
<tr>
<td>11:15</td>
<td>readaloud</td>
</tr>
<tr>
<td>11:45</td>
<td>lunch assisting with kindergarten</td>
</tr>
<tr>
<td>12:15</td>
<td>community games outdoors</td>
</tr>
<tr>
<td>12:45</td>
<td>silent reading</td>
</tr>
<tr>
<td>1:15</td>
<td>social studies—teacher presentation</td>
</tr>
<tr>
<td>1:35</td>
<td>work time: tasks on web, including related to presentation</td>
</tr>
<tr>
<td>2:45</td>
<td>social studies—video</td>
</tr>
<tr>
<td>3:10</td>
<td>jobs, dismissal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>circle</td>
</tr>
<tr>
<td>9:20</td>
<td>music, art, drama, or dance</td>
</tr>
<tr>
<td>10:10</td>
<td>music, art, drama, or dance</td>
</tr>
<tr>
<td>11:00</td>
<td>work time: journal, reading log, centers, computer, etc.</td>
</tr>
<tr>
<td>11:20</td>
<td>assist with schoolwide lunch distribution</td>
</tr>
<tr>
<td>11:45</td>
<td>lunch in classroom</td>
</tr>
<tr>
<td>12:15</td>
<td>community games leadership outdoors</td>
</tr>
<tr>
<td>12:45</td>
<td>silent reading</td>
</tr>
<tr>
<td>1:15</td>
<td>science demonstration of concept related to web</td>
</tr>
<tr>
<td>1:35</td>
<td>work time: tasks on web, including related to science demo</td>
</tr>
<tr>
<td>2:00</td>
<td>community games leadership training</td>
</tr>
<tr>
<td>2:30</td>
<td>Chapter One remedial session</td>
</tr>
<tr>
<td>3:00</td>
<td>circle, jobs, dismissal</td>
</tr>
</tbody>
</table>
Curriculum Integration

Southside is an alternative school. So, while adhering to the curricular mandates of the school district at each grade level, the teachers are allowed more than the usual degree of discretion in selecting curricular content. This section refers to curricular content and activities to which the teachers and students devoted significant attention and/or which exemplify how content in the different subjects was integrated. Teachers were expected to incorporate schoolwide themes into their children’s work—three themes consecutively over the course of the school year. The presence of these overarching organizers suggested that at least a nominal integration of subjects would occur. Mr. Barnett, the principal, believed that the integrated curriculum, especially the reliance upon resources other than textbooks, made learning about the world “come alive" for the children.

Mrs. Gregson and Mr. Haines took integration seriously, making it one of the bases of their curriculum development for the year and their daily planning. Their decision making in these processes was guided by their personal strengths and interests, their intention to satisfy district objectives for concepts and skills, and their desire not to make pupils who had been with them for a year or two repeat old tasks. Within a theme, they cooperatively formulated major interdisciplinary areas, or units. The term "web" refers to the interrelated complex of topics and
pupil tasks developed by the teachers to comprise each of these units.

To organize their work, Mrs. Gregson and Mr. Haines together drew up topic webs beginning with the name of the theme in the center, surrounding it with the names of the units, and listing the component topics below each unit. Most units could be characterized as having a frame of reference in social studies, and some in science. Within either kind of unit, individual topics could have a social studies or science orientation. Designations of "social studies" or "science" were, however, not usually stated; in practice, many topics encompassed both. At times, to justify the inclusion of individual topics that they deemed appropriate, they found it necessary to interpret district objectives broadly, "stretching" them somewhat.

The year's first schoolwide theme, lasting from day one through December, was "Togetherness." Its concrete materialization in Room 9 was a set of studies that would, in effect, accompany the planning and execution of a real Antarctic expedition by a multinational party, which was receiving detailed mass media coverage. The trek was portrayed to the class as the rationale for many of their activities. Within the context of Antarctica, Mr. Haines and Mrs. Gregson interwove two major areas of study. One area, comprised of history, geography, and civics activities under the title "Rights and Responsibilities,"
encompassed: (a) the U.S. Constitution, especially the levels of federal government and the legislative and judicial branches; and (b) the United Nations. The other area, an ecological study of the Antarctic biosphere, dealt with Antarctic animals, food chains, weather, and the utilization and conservation of resources.

For much of the year, webs for each unit were represented to students on duplicated sheets. Names of tasks were printed either (a) surrounding the title of the unit, connected to it by rays or spokes or (b) next to it in the form of lists. Some task webs were meant to last only a week or two; others a month or more. Each web named about ten to fifteen tasks, some required and some optional. Each task called for reading and/or some other form of investigation and suggested a textual, graphic, or oral product. The teachers customarily described the details upon distributing the webs, with pupils sitting in a circle. Each pupil kept web-related work-in-progress in a manila folder. One parent referred aptly to this approach to curriculum and instruction as "multicultural, light-touch studies," although "light-touch" does not reflect their breadth or depth so much as the element of choice in them.

Math topics were not rigorously integrated into the thematic activities. Posing a word problem in terms of an Antarctic situation was as far as that integration was taken. Many of the
reading and writing assignments and options, both factual and fictional, during the weeks of the Antarctic study were broadly related to government, human rights, exploration, and the science topics. Students' daily journal entries were, for a time, expected to simulate those of an expedition.

On the whole, it appeared that in their planning and instruction the teachers distributed their time, energy, and talent—their own personal investment—most generously in social studies and language arts. Science appeared to receive less of their investment than these subjects but very likely more than in most elementary classrooms. Math appeared to receive less emphasis than is typical elsewhere. The teachers confirmed these assessments.

About the purpose of school, the teachers spoke in terms amenable to an integrated, whole language curriculum and intrinsic motivation. Mr. Haines told me that to him, the purpose is

...to get kids interested in what's going on in the world around them....lifelong learners, kids that are interested in literature, have a sense of curiosity about the world....You're giving them the ability to grow and to learn the things they need to survive once they get out in the world.

...that the kids are excited about it, that they're doing research on it, they're learning how to do research, things like that....Sometimes I think we turn that [interest] off more than we turn it on, but that's what I view as the main purpose of schools.
Mrs. Gregson agreed:

Students should come out as independent learners that no matter what the subject matter is, they can know where to find the answers and know how to go look for answers, not that they have memorized a wealth of information. And the other purpose...is to make them self-confident, good citizens....Whatever their choice of work or lifestyle is, [to] be able to contribute in a confident way to society....

I think education can accomplish some basic kind of survival skills: money--those kind of things. I think that education can accomplish confident readers, appreciation for arts....[so that students have] a feel for and have read a variety of kind of things so they know what type of books they like in general and then...the rest of their lives become readers.

**Continuing Motivation Throughout the Curriculum**

This section presents for each subject area: (1) an overview of content and process in Room 9; and (2) brief descriptions of the instances of CM, documented--through classroom observations and interviews--to have occurred in school and at home during the 1989-90 school year. When previous experiences that seem relevant to the CM have been revealed in interviews, they are related here.

**CM at home and in school.** Since opportunities for children to choose their own activities occur, in general, more frequently at home than in school, it is not surprising that the large majority of CM instances reported by participants took place at home or in the community. While independent reading and creative writing often were done in school as well, continuations in math, science, and social studies occurred almost exclusively at home.
Some home activities were done with peers or siblings; some were solitary. Reading, writing, and thinking could be done in one's room; a science experiment would have to be done elsewhere. Other activities required the participation and indulgence of parents or other adults.

**Social Studies**

In preparation for a simulated Antarctic Treaty Conference, task groups were formed in September, each taking the identity of a national, industrial, or environmental interest group. The class took a field trip to a major aquarium to study Antarctic fauna and flora. To enliven their understanding of rights and responsibilities, they spent a morning at the state legislature. Portions of the class also visited city hall and the county courthouse. The school nurse and an actual Antarctic explorer addressed the class. The semester culminated in an elaborate, morning-long forum led by a guest host. In the partially-choreographed, partially-spontaneous conference members of each group presented, defended, and cast votes on proposals reflecting various views of rights and responsibilities toward Antarctic resources.

The theme for the portion of the school year from January through early April was "Journeys." A "journey from the old world to the new" included studies of colonial and early American history, concentrating on Ohio and on slavery and its aftermath.
A "journey through the body" dealt with all the systems of the body, including three days of "human growth and development," in which the focus was on reproduction and sex education. A four-day stay at an outdoor education camp, followed by completion of camp notebooks and creation of informational wall posters, brought the theme to a close.

The third theme, "Reflections: Variations on a Theme," lasted through the end of the term. Much class time was concentrated on a study of the ancient Egyptian, Aztec, and Mayan civilizations. Every child worked on one of five cooperative long-term projects while also doing daily assignments. An unusually large number of books were borrowed by the teachers and maintained by the class in an orderly fashion to provide written and pictorial information. The daily readaloud was a compelling juvenile mystery called *The Egypt Game*, by Zilpha Snyder. The study culminated at year end with the school's annual international fair, in which the classroom became a museum of ancient cultures, with displays of artwork, illustrated informational reports, and three-dimensional models.

**Oral feedback about reports.** Oral presentations of written reports were usually made at one or two junctures during the study of a topic. The class or a portion of it would be gathered, and two or three children would read their reports. Following each report, there was usually a comment from the teacher or a
classmate on the presenter's understanding of the topic, as inferred from the report's length and smoothness and the presenter's ability to answer questions coherently. Negative criticism from the teachers was generally minimal. Material copied directly from reference books was rarely if ever censured, but pupils were sometimes reminded that the information had to come from a source other than oneself (#30).

Continuing Motivation--Forms and Content of Resumption--in Social Studies

Reports. I had expected that an emphasis on social studies would result in quite a few children eagerly exploring topics on their own in encyclopedias and non-fiction books, writing reports or illustrated "books" to give substance to what they had found. I did find a few. Freddy, for example, spoke of using "lots of books" to write an assigned report on several explorers, then writing an extra portion. Kenneth and Gary worked on and off for several weeks on a 12x18 inch scrapbook of articles and information about earthquakes, for extra credit. Reports were not, however, a particularly common form of continuation.

Watching TV. Among the ways Antarctica was studied was to watch TV and video programs about it in class. Dallas noted in his journal that his parents were going to watch a TV show about Antarctica. Although he would have enjoyed playing Nintendo
instead, he was interested in the show and decided to watch it with them. Kenneth, too, watched a TV program about Antarctica.

**Reading.** Although classwork on explorers culminated before the Christmas break, Martha spent part of her vacation reading a book about them. This year's Martin Luther King Day celebration included an assembly featuring a guest speaker, recorded music, and singing. Soon after that, Caroline, who is African-American, checked out a library book about King and civil rights.

**Thinking and talking.** Ted said to me, "The Antarctic Treaty Conference gave me a idea about all the other societies and what they thought about what should happen to Antarctica." Did it make him to do anything afterward? "I just kept on thinking about what kind of clothes they wore there, if they were freezing or not." From incidental mentions of current events in class this year, Ann brought up the Berlin Wall and Eastern Europe at home. She watched the destruction of the wall on TV with her parents but first heard about it at school.

Kenneth presented facts from social studies and science to his parents in a sort of quiz. "He's always doing this to me," his father quipped, "He says, 'Dad, what's the coldest place on earth?'" Tina's father said that without provocation she would bring up "interesting facts and figures about outside events and other countries and other peoples....She will say, 'This is how they do it in country A,' or 'Antarctica is solid land but the
Arctic is partially ice.” Albert would tell his mother things he learned about Antarctica, such as how it is always cold there. Caroline’s parents said they learned things from her about ancient civilizations.

Clarissa described to her mother the dinosaurs she saw on a field trip to the historical center and the laser at the science museum. According to her mother, she liked activities involving participation in the ways of other cultures. She recalled that when the children cooked at school, Clarissa brought home her dish, and they both ate it. When she came home with chopsticks last year, they ate with them. She has brought home outfits from different cultures that the pupils have made for dance or drama.

**Fantasy.** For some children the action possibilities of social studies topics included fantasy play. Andrea wrote in her journal, "I played in the snow that I was going across Antarctica...[W]e made tunnels and played the chronicles of narnia and I was Susan." Wendy described to me how she turned her bedroom into Antarctica, putting down bedsheets for snow and considering emptying her pillows.

Ted is a boy whom a teacher might describe as being off in his own world. Although highly articulate and logical, he was not easily gotten to sit still during teacher presentations. A prolific reader of fiction and non-fiction and an aficionado of video games, he would think about and could easily be drawn into
conversations about his interpretations or extrapolations of stories that he had read, heard, or seen on TV or in games. Having learned about emperors of China last year, Ted told me that over Christmas vacation he built a throne out of snow. During the class' immersion in the ancient Egyptian, Mayan, and Aztec cultures this spring, he enlisted colleagues into an ongoing fantasy. In class he was Pharoah and Kenneth Osiris. They began writing a script with parts for each. "Gary isn't a king yet, because he didn't write a good enough script," he noted. The three were attracted to hieroglyphics and made an effort to decipher a codex by using a chart in a book about Egypt. Crowning himself Pharoah in the after-school daycare program, Ted led an "army" of several younger children. "I make all sorts of clothing out of felt and put it on." He obtained it in the daycare room. "Little battle masks and things that you put on your arms...and a belt and, like, a little vest...." At home, too, he tried to be Pharoah, but his little brother would not follow.

Writing. Jackie told me that she lies on her bed and thinks about what happened during the day. She writes letters on her own and keeps a journal at home. "The one at home's a little bit more personal than the one at school," with things like feelings and wishes, she said. During the Antarctica activities, she told me she expected to write in her home journal about them. When the Antarctic explorer completed his slide presentation to the class, they were given 20 minutes to write about it in their journals,
just prior to dismissal. Although most pupils were restless and eager to go home, Albert demonstrated intensity and quality in a detailed, five-page entry that reflected his enthusiasm about the presentation. His mother told me he was still excited about it when he arrived home.

Real life application. When she was in the Antarctic study group that represented Australia, Caroline persuaded her mother to buy kiwi fruit and Australian fish for home. A number of the children interviewed were asked if any of their independent work had come from the study of Rights and Responsibilities. Penny wrinkled up her nose and face, expressing what appeared to be a sense of boredom with the area. No one spoke of extending those tasks, except Ted. In the classroom one day, feeling stifled by a lack of freedom in after-school daycare, Ted asked me about a portion of the Bill of Rights. I suggested he might find it in an encyclopedia or library book. In our interview about a month later, he showed me a copy another class had posted in the hallway. He had read parts of it, perhaps with parental assistance. His resolution of the problem:

Well, I decided that the daycare teacher can't make me stop talking unless it's important circumstances; and we are allowed to protest peacefully, and she can't stop us or she won't be obeying the Constitution, and that I have a right to speak with Mr. Barnett if something that I feel is not right going on, and things like that.
Science

For topics in natural science, the class was commonly guided by Mrs. Gregson. Generally, she would introduce the topic twice, once to the pupils nominally assigned to her and once to those of Mr. Haines. Pupils would be gathered in chairs, on the floor, or both for a lecture-type presentation, an experiment, a demonstration of devices relating to the topic, or a combination of these. She often wrote on the chalkboard or a flip chart. Note taking was sometimes required, sometimes optional. Typically, she began by asking pupils several questions to elicit their contribution of something they might already know about the topic. Xeroxed or dittoed sheets would be distributed, as a complement to what she was saying or as an assigned task. The presentation would generally last twenty to forty minutes. Typically, subsequent sessions might be devoted to pupils carrying out simple experiments, cooperatively or separately, and recording results.

Science tasks often required students to obtain materials from or to work at centers. Pupils could be found engaged at centers immediately after a science presentation, during afternoon web time (work time), and whenever not expressly prohibited because of some other activity of overriding importance.
As part of the Reflections theme, science fair projects were required of the fifth graders; projects were optional for the others. The teachers explained and emphasized a step-by-step process meant to uncomplicate the potentially troublesome business of choosing, exploring, and presenting a science idea. To assist some of the pupils, volunteer mentors were found. The projects—many simple and a few relatively complex—were presented at the school’s annual science fair at the end of April.

Continuing Motivation in Science

Writing. After Mrs. Gregson’s lessons on ocean habitats, Andrea made a journal entry listing most or all of the animals that had been named on the flip chart and the handout. She wrote that learning about habitats was "neat."

Art. At the aquarium they received a great deal of information about animals, especially penguins, and even got to touch a penguin. A number of tasks assigned in the Antarctic web included drawing. Therefore, most topic-related art work observed during that thematic study could be assumed to be web assignments. Some must have been volitional, though. Ann told me, "I drewed a picture of the penguin....It’s not exactly for school. I wanted to draw one." She did it at home.

Experiments. To attempt a science experiment and attain the desired result one’s own is clearly a way to have efficacy. After
a classroom guest demonstrated the effect of mixing vinegar and baking soda in a model volcano, Dallas tried it at home "just to see it fizz up." No one was around, and he used up all of his mother's baking soda. Two pupils freely followed the old cups-and-string walkie-talkie experiment, which was shown in the fourth grade science book (not distributed in this class). Norman, a fourth grader, did it with a girl he knew in another fourth grade class. Penny had done it from the book in her fourth grade classroom last year and tried it a second time this year at home with surprisingly naive expectations. "It doesn't work," she said. "The reason I did it at home is cause my sister is always using the phone, and I wanted to have a different phone to use."

Also at home, based on an experiment in which Mrs. Gregson had tested for acids and bases in foods, Penny put raw egg in cups and added things such as coke. After an experiment she saw on a class trip to one of the museums, "I took some water...and put two different minerals into each two bottles of water, and see which one dissolves water." From an art museum trip, "I took a [widemouth] bottle and tried to make a paper palace and try to stick it in there, in the bottle."

**Sex education.** A topic that resulted in some CM was human growth and development, which the class studied at length for one week, boys and girls separately, with special filmstrips and opportunities to ask questions. When asked what schoolwork their children had talked about at home, three mothers brought up
instances of CM stemming from this study. Albert’s mother told me, "He was very excited about the reproductive system. They just started that. And he ran in, he didn’t say ‘Hi, Mom,’ or anything. ‘Mom, what is a wet dream?’" Patrick’s mother related, "Lately they’ve been studying sex education, and him and his friends get in discussions." Caroline’s mother said, "When she had sex education, she said, ‘Mommy, you was right! They said the same thing you told me.’"

Science fair projects. Seven third and fourth graders took part in the fair, although they were not required to. Third and fourth graders were permitted to work in pairs on a project, and four girls did so. Among them were Thea and Sally, who placed a gerbil in a maze. It is not known whether the gerbil was originally bought because one of the girls had enjoyed a gerbil in school. If so, then their project would be more clearly an instance of CM—a return to a task area.

Although the extent of third grader Freddy’s awareness of earthquakes before this year was not documented, it is safe to say that the class’ attention to the San Francisco quake was an impetus for his project. He took an electric football game—the kind that consists of a flat, two-foot-square metal surface on which little plastic players are moved when a motor beneath makes their field vibrate. He covered the surface with soil and on top of that placed two different structures made from toothpicks and
glue. The question was: How well could they withstand the vibrations?

At the end of the year, about six weeks after the science fair, pupils filled out a questionnaire, "About the Science Fair," asking about their feelings while doing a project and any continued involvement with projects since then. Only two pupils indicated that they later engaged in spinoffs of their projects. Kenneth's family had been recycling some of their trash. His project was a record of the trash they were throwing away or recycling. He wrote that he continued to recycle. His parents noted that while working on his project he watched a TV special about Earth Day. Third-grader Hilary's project was a simple demonstration of sunlight and darkness when the earth revolves around the sun, using a flashlight and a globe. Because Hilary was unable to explain it coherently, her mother actually carried out the demonstration, and Hilary assisted. Hilary wrote on the questionnaire that she went further: "I have been looking in the Dictionary." Why? "Because I liked it. It was fun."

While only 2 children indicated they had continued their projects, 13 of the 36 respondents to the questionnaire indicated that they had "thought about" a project someone else had done, and 8 of them named the person or persons. Three pupils actually re-created someone else's project after the fair. Freddy carried out Albert's simple experiment of balloons and static electricity.
"[I] made it better," he wrote. Clarissa, modeling after a project another girl had never finished, told me, "I took nails and put them in Pepsi and they melted." Joey copied Patrick's project exactly, using the air pressure in a plastic soda bottle to shoot a projectile high into the air. Although very different in appearance from Joey's, Patrick's project was quite similar. Both of them demonstrated that there is a relationship between the distance an object will travel and the angle at which it is shot into the air. Joey rarely seemed to invest in classwork. So, in reviewing early field notes, I was fascinated to realize that in September he had been pointing out and talking intently with two classmates about a page he was reading—a page showing a diagram of the trajectory of a dolphin's leap.

**Responses to a dissection.** As part of the Journeys theme, Mr. Haines guided a journey into the body of an animal by dissecting a chicken leg. He did this three times in one day with ten students in each session. I observed two sessions, paying close attention to the presentations and pupil participation. Unlike any presentation prior to this, the class was not told in advance what would be presented, a corner of the room was partitioned off, names were called, and the chosen were placed around a table in the corner. Participants had been selected from those who: (a) had seemed most interested in a previous demonstration with cow bones; and (b) were considered likely to be cooperative; plus (c) those who asked after the first session had
begun. The rest were given other tasks and were shooed away if they came over to observe.

The activity drew much curiosity, questioning, and eagerness to participate. The demonstration seemed clear in its factual and conceptual points and memorable in both form and content. Apparently, nobody had seen or done a dissection before. All were close enough to see and hear clearly. Mr. Haines had been sure to place girls and boys alternately, so the girls would not be overwhelmed by the assertiveness of the boys. Every pupil at the table had a chance to carry out part of the demonstration. Mr. Haines was clearly comfortable and enjoying the work. He and nearly every student proceeded with good humor, and disorderly behavior was minimal. The lesson was an unfamiliar treatment of a familiar object (Keller, 1983). Jesse’s behavior was testimony to the allure of the lesson. Usually a disruptive agent, he was enthralled, his usual cool pretense replaced by an unaffected diligence. There was an element of adult work and a bit of danger in the use of sharp instruments; there was an element of fun (revulsion for some) in seeing and touching the "gross" chicken leg. Questions were encouraged and answered. Pupils who commented about experiences in their own families with chickens or sharp implements were encouraged to expound.

After he set a few groundrules, the general procedure was for Mr. Haines to make a cut that would expose a particular portion of
the leg, identify it, tell something of its purpose, and give a student the tool to continue the cut. Pupils were to watch and take notes, preferably in outline form, and sketch what they saw. The process was repeated for various organs of the leg. To each group he handed out a worksheet adapted from the book *Blood and Guts* by Linda Allison; he held up the book and recommended it. Completed notes and finished sketches were to be handed in within several days.

More than a month after the activity, having noticed no student references to dissecting or chickens, I asked several participants whether they had done anything related to those topics. None said they had, and when I asked whether it ever came to mind when eating or shopping for chicken, few answered affirmatively. However, it was only about two weeks after the dissection that Mrs. Gregson departed, to be succeeded first by substitutes and then a permanent replacement. According to Mr. Haines, in the transition he was unable to carry out much of the remainder of the unit in a coherent way. Students experienced some distraction, as well, from the change in teachers and alteration of routine. I concur with his assessment that these unusual circumstances undercut CM that might have developed from the unit.

Undoubtedly, children talked about the dissection at home; but not one of them students raised it in interviews, and of the
parents interviewed only Tina's father brought up that it had been mentioned. Still, Mr. Haines told me that several pupils had suggested the possibility of doing a dissection for their science fair projects. Indeed, a project displaying chicken bones was presented by Bonnie and Margaret. Because they were third graders, their project was voluntary. Bonnie had actually been present for one entire dissection session plus part of another--more than anyone else. That Bonnie's family was raising chickens at the time was also clearly influential on her choice of project. Margaret was one of only two pupils whom Mrs. Gregson recalled handing in a particularly fine drawing of the chicken leg. Thus, a connection between the dissection and their project is tenable.

One child who clearly remained involved after the dissection was Kenneth. Kenneth's family was strictly vegetarian. In deference to Kenneth's position, Mr. Haines began the session Kenneth attended with a short remonstration of the term "ethics," explaining to the group that an increasingly large number of people legitimately object to the harming of animals. He noted that Kenneth had never eaten meat in his entire life, a fact that made the ethical argument a poignant reality to the group. The teacher then stated his own position that dissection in school is acceptable only when the animal would otherwise be eaten. He told Kenneth that he was welcome to leave the group if he wanted to.
After staying a few minutes longer Kenneth left, rejoining the rest of the class.

Later that afternoon, Mr. Haines found Kenneth to be quite upset ("kind of upset" in Kenneth's words). In our interview several days later, Kenneth noted that some classmates criticized him after the dissection. He spoke solemnly:

I don't see why we should wear fur coats when you...kill something for it; you can always just wear polyester or cotton. What's wrong with them?

Sometimes the conversation pops up, and some kids just reply, "Hey, they're becoming overly populated. We gotta kill 'em so they won't"...and...sorta like, "How would you like to be shot! We're too overpopulated....I mean hey! Why don't we just go shoot you! We don't have enough room for ya." And then they just say, "Well, that's an animal. That's different." And how is it different--they've got a mind....I'm sure they can feel pain. When you step on your cat's tail they feel pain.

Kenneth's father, when interviewed, did not think his son would spend his time reading about things he was learning in school. "He likes to chat about...he'll bring up things--but as far as doing any additional reading, he's not going to," said his father. In this case, he seems to have misjudged his son.

Ironically, at year end when all students (except a few absentees) were surveyed as to whether they had checked out Blood and Guts as the teacher had suggested, the only one who said yes was Kenneth. Checking with him personally to make sure I was interpreting his answer correctly, I was told he did it because he was interested in it.
Reading

Reading activities were those that one might expect to take place in a whole language program (see, e.g., Goodman, 1986; Newman, 1985; Routman, 1988). Reading assignments were made from trade books rather than basal textbooks and often referred to current social studies and science topics. Discussion and comprehension checks of readings occurred in informal small groups or individually. Groupings tended to be based on interest as much as on skill level. A large selection of books at various levels on class topics was available in the room, and access to the library was quite free. Sustained silent reading and teacher readaloud occurred daily. Assignment options, to elicit further thought and feelings about books just read, included art and creative writing in various formats.

Continuing Motivation to Read

Books assigned. Some pupils read assigned books a second time on their own. Penny did so with The Witch of Blackbird Pond by Elizabeth Speare, both at home and at school. Even though she did not like the beginning she read it to get to the parts she liked. Wendy, Penny's frequent partner, had a slumber party and read scary passages from the same book out loud while music blared on the radio.
Books heard aloud. For reading aloud, the teachers sometimes selected books of which they have several copies, so pupils could follow along. It was not uncommon for pupils to check out books that had been read aloud. Borrowers read some all the way through and others only partially. After Mrs. Gregson had read Tales of a Fourth Grade Nothing by Judy Blume, Caroline started it but did not finish. Eddie was twice seen carrying books that had been read to the class, although it is not clear that he ever actually read them. Patrick liked Blume’s Freckle Juice, another of Mrs. Gregson’s oral selections. A substitute suggested to Patrick that he read it, and he began but did not finish.

Because Albert was prone to tussling and talking during worktime and scored low on his verbal achievement test, his keen sensitivity to language could easily go unrecognized. He was an easy conversant when it came to his interest in books, citing details of those he had read. He quoted to me from memory: "He took back the whip, and he slammed it, and it made a crackle, and he bust a window with a apple." Undoubtedly, this was Soup by Robert Newton Peck, one of Mr. Haines’s readaloud selections. Albert had read it all the way through.

Albert told me his mother read him stories when he was in kindergarten and first grade. When he got to second grade, he was reading on his own. He said that she and the mother of a friend used to take him and his brother to the library, where they were
allowed to check out five books apiece. He would get five scary books; his brother five funny books, which Albert sometimes read, too. He explained that he used to read short books and comics such as G.I. Joe and Transformers, but since the teachers were reading chapter books this year, that is what he was choosing now. The change in the form of reading tasks that he is motivated to do on his own (i.e., the change in his CM) is thus due in part to the change in form that he experienced in school.

**Exploring an author.** Of their own volition some children read different books by the same authors encountered in assignments or out-loud readings. To do so was a strategy sometimes suggested by the teachers. Jackie liked to read mysteries, funny books, and fantasies. She had read *A Wrinkle in Time* by Madeleine L'Engle last year when it was assigned by another teacher. This year Mr. Haines read it to the class. Her mother bought her *A Swiftly Tilting Planet*, not realizing it was the third in the series. Then Jackie asked Mrs. Gregson to get her the second one, *The Wind in the Door*, so she could follow the sequence.

Ted liked books by Lloyd Alexander, who writes about Wales—"You know: that place in England; not whales wales." He discovered the author in the school library this year and has read five of his books. This boy also read the trilogy by L'Engle, after first hearing *A Wrinkle in Time* read aloud. The day I
served as substitute reader, Ted had already read ahead and could barely contain himself, interrupting to explain events in terms of reasons we had not yet come to.

Pursuing a topic. Early in September, given a choice among several books dealing with prejudice, Jackie read *When Hitler Stole Pink Rabbit* by Judith Kerr. It was assigned as her official reading book, so she met several times with Mr. Haines and a small group of her peers to discuss it. In her reading log he wrote her some questions about it. In late October when the class visited an art museum, the main exhibit happened to be early Jewish art and artifacts. The trip was followed three weeks later by a special art experience: doing micrography, the ornate shaped writing that appears in Hebrew documents. By mid-December, on her own, Jackie read two other books about Jewish people and World War II, *Upstairs Room* by Johanna Reiss and *The Diary of Anne Frank*. Mrs. Gregson had suggested them and found a copy of the latter one for her. Jackie told me her interest in the Jewish people began earlier, from bits about them she had heard from her parents, her church (Mormon), and in school.

Books unconnected to class. Some students' selections did not appear to directly reflect their schoolwork. But because reading is a task form that was encouraged in school, and it provided a way to pursue things that turned them on, these selections can justifiably be called CM. Ann liked to read about
little girls, so having begun with Ramona Quimby Age Eight by Beverly Cleary she went on to Ramona and Her Mother. She got them from the school library and read them at school and at home. Kenneth's chosen reading tended not to reflect what he was studying at school. He was a voracious reader nonetheless, whether of The Hardy Boys, the sports section of the newspaper, or something borrowed from the school library.

Tina, perhaps the most prolific reader in the class and certainly the most mature in taste, read books in series and read some a second time. Her choices this year ranged from Laura Ingalls Wilder to Tolkein to adult selections such as the Cave Bear series by Jean M. Auel and Russell Baker's best selling autobiography, Growing Up. She would browse the school library and sometimes check books out but could not recall particular books she heard or was assigned in class that might have guided any of her independent choices. She seemed to be as turned-on by the task form--the experience of reading--as by the content: "The thing I'm most interested in is reading, and there's not a, really, thing you can study about reading, right?"

Writing

Consistently with the school's whole language philosophy, the teachers organized the language curriculum in this class with the intent that the children would have frequent opportunities to write, for a variety of purposes. The pupils wrote daily entries
in steno-pad journals that were periodically checked and answered. Several pieces of creative writing, usually narrative or descriptive, were expected of each child in each of the four grading periods of the year. To elicit creative writing, the teachers presented a variety of writing prompts: visual, aural, emotional, and intellectual cues. The sequence prescribed and followed in these pieces was to write a draft, choose a colleague (sometimes a parent at home) to help revise and edit, then re-copy in pen or on computer. A visiting author showed how the books the children like to read actually begin in much the same way as their own writing—in a comfortable chair in a cluttered room. She answered their questions. There was no formal instruction in spelling, nor was it graded. Those practices are essentially obviated by the theory of natural stages of development of spelling that is applied to whole language approaches (Newman, 1985).

Several other kinds of writing task were sanctioned. Early in the year, pen pal letters were received from Denmark. Letters were written in return and sent off, but the exchange materialized no further. Students kept a "reading log," a spiral-bound notebook in which they answered conventional questions about plot, setting, character, and what they liked in books they were reading. If reading more than one book at a time, they were only expected to keep a full record of one. The logs were checked periodically and quality of work discussed occasionally in
individual conferences. Participants in Luminaries, the foundation-sponsored program, were guided in the writing of poetry and twice met with a poet to read and discuss each other’s work. Reports and other short writing assignments, required and optional, were connected with each social studies/science unit. Pupils sometimes did them according to the process used for creative writing but were not generally required to do so.

Oral feedback about creative writing. When several children had finished writing pieces of creative prose or poetry, or if Mr. Haines wanted to hear someone’s work-in-progress, he replaced his pre-lunch readaloud session with the "author’s chair."

"This is the most comfortable chair in the room," he says, rolling out the armchair from his desk. He invite students to sit in it and read their writing. Victor volunteers. His is about the praying mantis they have observed. Mr. Haines asks the group what Victor has done well, gets some responses, then, as usual, compliments the author on an aspect of his story. Wendy reads a story in progress, about a "diamond queen" in Europe. Her form is unique—"Just the facts, ma’am." She says she got her idea from her Carmen Sandiego computer game at home. Kenneth’s story is about preparing for a trip, but as a college student. Mr. Haines asks the group whether it takes place in the past, present, or future. When a student does not know, Kenneth is asked to re-read the section that provides clues. (#8)

Continuing Motivation to Write

Quite a few of the children carried out various forms of writing on their own in class and at home. I observed instances of unassigned writing, discovered others through interviews, and learned of several from Mr. Haines. The genres students used were those that they had experienced in reading and writing.
assignments. Some factual reports were spurred by special events and fortuitous circumstances (e.g., the visiting author, praying mantis in the room, San Francisco earthquake). Independent creative writing of prose and poetry was performed with gusto by a number of pupils.

**Story writing.** Kenneth, Wendy, and Victor all considered themselves avid writers of mystery and fantasy. They wrote at home and after finishing their writing assignments at school.

Wendy told me she had written many that were not for school. With titles such as "The Case of the Missing Diamond Queen" and "The Horse Caper," her stories placed actual people in fantastic, sometimes funny situations. In an activity chronicle she noted having written a ghost story. She told me it was sort of a secret that she did not show anyone. She tried asking her sister to write with her, but the dragons and other topics her sister picked lacked the touch of realism Wendy was seeking. She and classmate Andrea wrote "The Horse Caper" together, revising and editing the rough draft according to the process they were taught. They gave their final copy to Mr. Haines, and he O.K.'d it, even though it was not an assignment.

Wendy could not think of anything this year that was causing her to write more. "They just sort of pop into my head." She figured she had started writing very short stories in kindergarten. When she wrote at home, she listened to music on
the radio. She printed her final copies on computer at home but found it easier to write her stories in pencil first. She put them all in a notebook with pockets at home and had her mom and dad read them. At home she also kept a diary.

Kenneth got ideas for his stories from TV, movies, and books. "Mysteries--that's my main thrill--and fantasy." He took various types of characters--dwarves, for example, as in Tolkien's *The Hobbit*--and changed what they would say and do to suit his purpose. He acknowledged that participating in Luminaries gave him more opportunities to write stories, draw, and write in his reading log, all of which he liked. But being in this class did not, he claimed, make him more interested in writing stories for fun. He talked about his main motive:

I've always been fascinated with writing stories....It just interests me so much. I love writing stories. I don't know if I'm good at it or not, but it really doesn't matter right now, just as long as I enjoy it.

Victor said he had been writing stories since last year, when he transferred to Southside in the middle of fourth grade. According to his mother, however, he had been writing stories on his own for three or four years, with longer ones happening in the past year or two. Last year, Victor said, there were not many opportunities to write stories in class, so he wrote "mostly when I'd go home, and I had nothing to do." This year, seeing classmates writing long ones and making them into books during writing workshop time, he decided to do it himself. He could not
recall any particular content that got him started, but he preferred doing mysteries and scary stories. "I think it’s fun....When I’m not doing anything I just go and write a story." By not writing an ending, he could keep adding more and more.

He found the editing process to be no problem on his poems and shorter stories but a bit tedious on longer ones. For help in revision and editing he would get friends who were finished with their own work and interested in working on his story. At home Victor usually wrote at a table in the basement or lying on his bed with a book under the paper. His mother would help him revise and edit. They did not own a computer, but she used one all the time at work. When she would bring one home from work, he sometimes did his stories on it. He saved his papers in a special place so that his parents would not accidently throw them away. Despite his CM in writing, Victor wrote in his journal that his favorite subject was math.

Besides these most prolific independent writers, there were others who created stories on their own. Dallas said he had written a few—"about mysteries, like I read in my books....I just start writin’, and it feels like I’m right there with the characters." Several days after reading a mystery he would think of an idea and write his own. He started writing on his own last year with another teacher, he said.
Clarissa, too, wrote stories on her own, starting soon after she had learned to read, her mother said. When she wrote at home, she would write out an extra copy to bring to school. "One time I wrote about a big giant bear, and one time I wrote about a dinosaur, and once I wrote about a dragon that was a nice dragon. And he didn't know he breathed fire...." She had written the dragon story last year, adapting its complex plot from a dragon story that Mrs. Gregson had read to the class. Having kept it, Clarissa handed it in this year for writing workshop.

Thomas occasionally wrote stories of his own accord. His mother posted some of his stories and poems on the refrigerator. On the day the children's author made her presentation about how she created her books, Thomas went home and wrote a story based on a character in one them. For Thomas, writing could also serve as a catharsis:

Thomas: Sometimes I just be mad 'cause my little brother just gets--my mom and dad treat my little brother better than me and I just go upstairs, just get a piece of paper and write something down. And then after I get through with it I just throw it away....And I'll feel much better....Sometimes I write about what I'm mad about, and sometimes I'll just write about something good, or a bad story, about somebody gettin' kidnapped or something like that....Then I just read, and then I just be real happy...then just go downstairs and watch TV.

Author: Does your mother ever say, "Go up and write something, Thomas!"

Thomas: She just tells me go do something, and I just sometimes go out and play basketball or just go upstairs.
Like Thomas, Penny was a Luminary. She was quite productive at stories and poetry and claimed writing as her favorite task at school. "My hand likes to write all the time," she said. "I'm not good at drawling [sic] at all. I like writing." Yet, she felt, as Kenneth did, that although there was more required writing this year, she was not writing more on her own now than in the past. She told me that the idea for one story came from TV: a sea creature, actually the current, carried a man away but saved some children. Her father called her story a fable, she said.

Like Wendy and Andrea, Penny revised and edited her independent writing according to the process they were taught. "Sometimes I take some revising and editing sheets home and revise it with my parents....unless they're not watching something or doing their nails or eating...." She would not necessarily show them the finished product but rather "between paragraphs." They would correct misspelled words—which was fine with her--so she would not misspell them repeatedly.

Poetry writing. Children in the Luminaries program received a large dose of poetry. They were given various exercises meant to stimulate ideas and elicit their creative poetic expression. They were shown reproductions of professional paintings and photographs; they read poems of adults and of their own. Early in the year there had been some reluctance among pupils to read their creative writing out loud. Following a pre-designed poetry task
taken from *Wishes, Lies, and Dreams* by Kenneth Koch, Mr. Haines helped the Luminaries distinguish "safe" poems from "risk" poems, or poems that evoked emotions that people are sometimes discouraged from showing. Margaret wrote a risk poem that was acknowledged without fuss. Pupils were given the option of leaving the room when their work was read, and she took that option (#56). When the visiting poet heard the children read their poems (#69), he was strongly and sincerely complimentary. He told them, "You painted pictures with your poems....We are writing about how amazing it is to be alive." Andrea willingly spoke out that Langston Hughes was her favorite poet. Still, there was embarrassment at reading one's own poem or hearing it read. He read some anonymously, but such secrets are hard to keep, so authors were nearly always pointed out by traitorous friends.

Penny said she would like to become a poet but was not sure how. She would check out poetry books from the library. She recited to me a short poem memorized from a book she had borrowed last year. She had made a book of her own poems that included some from as far back as first grade. She knew that rhyming was discouraged in Mr. Haines's poetry assignments—he encouraged simile and metaphor—but in her personal poems she insisted on rhyme. Albert wrote some very sensitive, evocative poems. Given a choice of writing poems or something else, poetry was his choice. He also wrote them on his own, in school and in his room.
at home. After the music teacher played the humorous old Kingston Trio song, "M.T.A.", for the children, Ted thought up a satirical version that rhymed well and sang it to whomever would listen. Does he ever do other things like that? "No, only when I have something good that I can use to mock."

Pen pal letters. After waiting and receiving no reply to their pen pal letters, the matter was essentially dropped by the teachers. But Gary wrote another letter to each of his Danish pen pals over Christmas vacation. Prior to this year he had never written to anyone, save one or two letters to his mother from camp. Although, he said, the teachers "asked" him to write again, he did not feel he was being required to do it. "Was it kind of an assignment?" I asked. "Well, kind of. And I just wanted to write to 'em....He didn't tell me to do it. I just did it." (The following school year, when a Danish class came over in an exchange program, he actually met one of his pen pals!) Penny brought up her abortive pen pal correspondence to me on two separate occasions. She retained the girl's name and information about her and surely would have written again had a worthy answer to her first letter arrived.

Math

Without having to add up hours spent in each subject area, it was apparent that less time was spent by teachers and students at math than in the other subjects. Diagnostic tests for the basic
operations were administered at the beginning of the year; two or three other pre-assessments were given as needed. Pupils were placed in one of two non-permanent groups, according to their level of achievement in the skill being taught. To determine who would instruct which groups, the teachers discussed and decided upon comfortable ways to split the responsibilities.

A standing math assignment was the "contract," an individualized task requiring that a number of pages be completed in a period of time, usually about a week. Exercises on those pages usually emphasized computation more than concepts. Children placed finished contract assignments in a designated tray. According to Mr. Haines, progress made by some was great, by others little. (The teachers did not talk about contracts often. The work was rarely observed in the course of this study, and children were not queried about it.)

Continuing Motivation in Math

Dion is among those children who tended to consider it more acceptable to socialize and avoid schoolwork than to do it. He seemed to work reasonably successfully by himself in math, though, and considered himself pretty good at it. He told me that sometimes when he had no homework he would do math for fun. He would ask his ninth-grade sister to write examples for him to do. Occasionally she would check them, but most of the time nobody did.
Wendy had three math books at home that she had not returned from last year. Although she enjoyed math "pretty much" and felt she was doing "pretty good" in it, she was nervous about the upcoming citywide testing. She said that she would pick examples from those books for practice, without prompting from her parents.

I use them sometimes, when I'm real discouraged, from school, and I wanna, like ummm, citywide testing coming up and I'm real "Oh my gosh!"...And I wanna get prepared for it, and I see us working with math books, so I go home and pull out some of the math books and start working on pages....The very back in the book they have division and things....I want to do the best I can and get most knowledge I can in my head.

She denied that these concerns come from what adults have told her. "I just sorta get into my head that, 'Gotta learn, Wendy.'" Is math hard? "Well, once I get into the higher numbers in division and multiplication it sorta boggles my mind. And I run off and get my multiplication tables." Although she had scored in a mid-to-low percentile range on her last math achievement test, she thought fractions were fun and seemed capable of understanding where her difficulties lie:

They're real simple....Reduce! I have a little bit of a problem with that. I keep on forgetting what it stands for and means. I sorta end up taking away numbers instead of, well whatever....I take away too many numbers.

Ann would do extra math at home: sometimes what the class was on and sometimes something else. "My parents want me to do it. So, it's sort of that I have to do it." Her parents pointed out a math book from school and from which they encouraged but did not "force" her to do examples. Yet, she felt she would do it anyway, because she likes math. Her father said something I had
already read in her journal—that her friends called her "a calculator." She explained to me, "It's really amazing when you, like 8 times 6 is 48. And when 48 divided by 6, it's 8, and it's amazing." Penny felt very competent at addition, subtraction, and fractions. Sometimes in her spare time she did addition examples on her own from a book her mother bought her. But her mother would also make her practice times tables, "over and over and over until I get 'em in my mind."

While some students got examples from another person or a book, Ted made up his own—fractions, three-digit multiplication, and division. Caroline asked her mother to buy her a set of flash cards, and she did. Margaret studied multiplication and division tables over Christmas. Norman helped his friend in the other fourth grade class with her division. He was learning math from his seventh grade brother, but he liked helping his oldest brother, who was not so good at it. Tina started conversations with her father about math. He told me:

She's really interested in math. She's a better mathematician than I am (but I'm farther along than she is). So, we talk about math. Sometimes she'll be stimulated by something new that's going on in math. She'll bring it home and we'll try to find [real life] examples of it.

Donita said she would like the teachers to give out multiplication and fraction worksheets to practice over the summer.
Art

Although not considered by many educators to be an academic subject in the sense of math or social studies, art received a good deal of emphasis at Southside. At least four children in Room 9 had at least one parent who was a professional artist, and the father of another painted and sold ceramic figurines. The art teacher was present at Southside for five full days on alternate weeks. So, every other Monday morning, the pupils of Room 9A went to the art room; on Tuesday morning, the pupils of 9B did the same. The art teacher brought the children principles of design and composition, as well as techniques. All the children—third, fourth, and fifth graders—were given the same basic tasks. Paints and cut-and-paste appeared to be the most frequently used media, along with various forms of sculpture. She began the year with concepts of abstract art and tasks for creating it. The principles and concepts re-emerged cumulatively throughout the year.

The art teacher (like the music, dance, and drama teachers) often planned projects to match the current classroom topics. Projects nearly always took more time than her fifty minute period allowed, so children were given time to finish later in the week. Neither she nor the classroom teachers tended to rush children through their art projects, unless the projects had to be ready for a special event. The work was completed individually or in groups, at a time allotted by the teachers or whenever one's other
tasks were complete, either in the classroom or back at the art room. The art teacher’s schedule included “flex time” in which to help children take their work to completion.

Even as Mrs. Gregson and Mr. Haines and lamented their diminished flexibility to schedule classwork when many children were finishing art work, they treated artistic activities as an integral, important part of their academic curriculum. They encouraged the children’s artistic endeavors in conjunction with most topics and never were heard to demean the subject. The teachers’ commitment to the integrated art and language of the Luminaries program, described earlier, attests to their attitude.

Continuing Motivation in Art

Abstract art. For Thomas, the sketching introduced during Luminaries and the abstract expression studied there and in art class had a real influence on his drawing. He told me he used to draw spaceships and men but now it was different. He got up and demonstrated: he called it scribbling, but his efforts were clearly representational with a light touch and a free form. Jackie, also a Luminary, explained to me that she was attracted to the color, shape, order, and texture of abstract painting. She used her own paints at home.

Visually rich environment. The walls throughout the halls and classrooms of the school abounded with posters, laminated
illustrations from magazines, reproductions of professional art, and the children's own works. Displays generally seemed to get changed before becoming tiresome. This pictorial profusion provided ideas that children used in their drawings and paintings. Victor told me he drew things he saw around him. He would draw at home, in school, and even backstage during rehearsals of a professional play in which he was performing. He took advantage of the walls in school: "If I see a picture on the wall of something, I try to draw it and keep on trying to draw it, and make it different, finally after I get it good."

**Art field trips.** The class and various groups from the class took field trips to local art museums and exhibit halls. One day, outreach teachers from the district's arts-oriented high school came to show slides of works at the downtown art museum. About a week later, the class toured the museum and the high school. Several weeks after that, the class returned to the high school for more instructional activities related to the museum exhibit. Other trips ensued.

Children acted independently to mimic and extend these experiences. From their work at the high school, they took home foam rubber stamps which they had cut to create floral designs. Patrick told me, "When I got home I talked about it and printed flowers and stuff on the paper." Victor drew things he had seen at the museum, adding trees and other touches of his own. At the
museum, Ann saw a work that had objects hidden within it. She subsequently made some hidden picture designs and showed them to her neighbors to see if they could find what she had hidden. At home, after seeing dinosaurs at the science museum, she drew a picture of baby ones, with pencil, crayon, and marker and hung it in her room.

Some children who were impressed by the art exhibits may not have engaged in follow-up tasks but seemed to have set future tasks for themselves. Eight days after a museum visit, David referred in his journal to a painting he had seen there, saying if he were an artist, that is what he would draw. Wendy told me she got some ideas from pictures and sculpture at the exhibits. Penny said she was thinking about her experiences with abstract art: a painting she did in art class early in the year and works she saw at the museum. On a field trip to a major art gallery, Ted viewed the sculptor Claes Oldenberg's famous giant billiard balls. Still fantasizing himself as Pharoah, he mused on the sculpture, "It would be sort of cool to think about a rolling battle ram, that only I could possess."

Emulating the Structure of Interactions at School

Maehr, it will be recalled, cited "playing school" as an example of continuing motivation (1976, p. 443). Indeed, children of Room 9 emulated parts of the structure of school at home. Dion's mother mentioned that after the class had returned from
camp, he wanted to repeat the camp cookout at home, and they did. During the two-week period that pupils were filling out the activity chronicle, Clarissa, Martha, and LaRhonda wrote in their chronicles that they had played school. Talking with each of them, I learned that they all took the role of teacher at some time. Their students came from the ranks of friends, neighbors, younger siblings, cousins, and dolls. What aspect of school did they resume? They all "taught" math. LaRhonda, for example, taught times tables to her six-year-old sister. The day after Clarissa elaborated to me on her chronicle notation, she surprised me by bringing me the paper full of math examples she had done while playing school.

Beyond particular subject matter, Clarissa seems to have formed much of her playtime by borrowing the structure of schooltime. After teaching math to her students, for example, she gave them "game time" resembling rainy-day recess at school, with a board game borrowed from her older sister. Clarissa's mother portrayed her as a very real teacher:

There's a group of kids that always flock to my yard....What she learns at school she applies it to these children, because they do not know, as manners, getting along....A lot of them have attitude problems, and she sits out there and takes time with them....She tries to talk to them in a way, on their level, to where they understand and they don't feel bad.

Clarissa would play her violin for them. She was something like a big sister to them, and they wanted to do things that she did.
Clarissa's mother felt that there were no good models with whom her daughter had contact in the neighborhood. She stated that while attending her previous school, Clarissa's typical response to the neighborhood children had been, "You're just getting on my nerves." Thus, she reasoned that the ways her daughter dealt with other children were a direct result of attending Southside. Furthermore, she said that on spring vacation, rather than watch TV or go outside, Clarissa wanted to do schoolwork on her own and have her check it.

Sally, though not playing school, also adopted an archetype of its interactional structure. When reading to her pre-school brother, she made him raise his hand before he could talk to her. When Sally mentioned her younger brother to me, her voice and face expressed a sense of impatience with him. Making him raise his hand seemed to be a way of asserting herself over him. Her attitude seemed like Clarissa's old way. This comparison illustrates that what two students derive and emulate from the structure of school can be quite contrasting.

A point that comes across poignantly in this chapter is the variety of ways that CM was manifest by the children. It occurred in diverse ways in every subject area. It happened in class and at home. It often took a form different from that of the activity from which it sprang. In many instances the child's motivation was clearly intrinsic, that is, task-based. There were other
motives, as well. Motives, or personal incentives, for engaging in tasks are discussed in the next section.

Personal Incentives

In Chapter Two, I explained that personal incentives are latent knowledge of qualities in the environment that one perceives as attractive and unattractive and that thus influence what one does (Maehr and Braskamp, 1986). In preceding sections of this chapter I have described many of the independent activities of the children of Room 9, to show that they are instances of CM. The purpose of the present section is to interpret some of those instances in light of Maehr and Braskamp's typology of personal incentives, look at interplay among a student's personal incentives, and point out data that may suggest modifications to that typology. The discussion will necessarily be more inferential than the descriptions of the children's activities.

Personal incentives have been treated by Maehr and Braskamp (1986) and by McClelland (1985) (who called them motive dispositions) as traits, detectible through an inventory of questions and a thematic apperception test, respectively. In the present research, no such instruments were administered. I was not trying to measure the relative strength of stable personal traits in the pupils. Rather, I took Maehr and Braskamp's (1986)
classification and description of personal incentives to be a reasonable guide by which to make intuitive determinations as to what qualities appealed (i.e., were incentives) to pupils in individual instances of personal investment. Those authors developed their classification by interviewing adults about experiences primarily in the workplace. For their categories to serve as a guide for the present research, it was not necessary to presume that they must be literally transposed bar for bar, as it were, to describe the personal incentives of children. My presumption was that while the personal incentives in school children are likely to be similar to those in working adults, there are also likely to be differences.

Every person has a variety of overlapping personal incentives (or, using Deci and Ryan's term, motives). Any of them may be brought out by incentives in an event or a task. To recap, the four categories and eight types of personal incentive posited by Maehr and Braskamp are:

1. task-based (task involvement; excellence)
2. ego-based (competition; power)
3. social (affiliation; social concern)
4. extrinsic (financial reward; recognition for accomplishment)

Statements made by pupils, and in some cases statements by parents, seemed to indicate particular qualities of events and
tasks that tended strongly to attract pupils to invest. Certain personal incentives have been chosen for discussion here because: (a) they manifested particularly clearly in children of Room 9; (b) they differ from and so might serve to broaden Maehr and Braskamp's classification; or (c) their salience seems to be related to that of other personal incentives.

**Task-based personal incentives.** Numerous instances of children involved in and enjoying their tasks have been described in this chapter. Kenneth's statement, for example, about his love of writing stories demonstrates quite clearly a motive for task involvement.

Victor keeps the stories he writes. In a box under his bed, Gary has been storing the papers he has done since coming to Southside two years ago. Penny has a collection of poems she has written over five years. Is accumulation of one's accomplishments an incentive to do more? These pupils did not say to me that they prized their stacks of completed work. It seems, though, that being able to look at evidence of one's accomplishments, especially if it is growing, would tend to nourish one's feelings of efficacy. This efficacy would seem to be encompassed in the category of striving for excellence. An alternative construction of their collected papers is that they are part of a well-organized workspace—advantageous use of spatial and material resources.
A manifestation of the task involvement motive not covered by Maehr and Braskamp is that of fantasizing, which was the mode of CM in several cases. Tina, the prime exponent of task involvement in reading, described her feeling of involvement in a book based in fantasy:

I think it's wonderful, 'cause you really get into it....You're just sort of glued to the page....You usually get this entire picture of it, sort of just like you were actually seeing it happen....Like in The Fellowship of the Ring[s], they're walking through the forest with Frodo in the lead. And these...goblins, come up and try to catch 'em. You see these little purple creatures going "Cchh!"

When Thomas wrote in order to erase unpleasant thoughts, he manifested a third variety of task-based motive. This writing was cathartic. It was a way for him to have self-determination—to wrest control from his younger brother. The personal incentive of catharsis is certainly present in many authors but has not been noted by Maehr and Braskamp.

Social personal incentives. There were a number of instances in which pupils' dominant motive to continue their work appeared to be social. The science fair questionnaire at year-end asked students if they had thought about someone else's project since the fair. Of the 8 projects respondents cited, most had been created by a good friend. Thus, it could be speculated that the friendship may have sparked the interest. The incentive could have been competition, accompanied by the emotion of jealousy; more likely, the incentive was affiliation—desire to be close to
the friend. The four girls who had paired off to do their projects were friends.

The motive of affiliation with peers was important in the context of cooperative learning in Room 9. Part of the motive for affiliation seems to be a preference to conform. Victor, for example, was quoted earlier saying that he saw other people writing books, so he thought he would do it himself. Freddy quit working on his insect research when he noticed that other children had moved to a different topic. The feelings of these children affirm Maehr and Braskamp's (1986) statement that social motives tend to "prompt faithful conformity to the expectations of others" (p. 56).

The personal incentive of social concern was demonstrated by Freddy's interest in the problems of Africa and possibly by Jackie's interest in the Jews in World War II.

Ego-based personal incentives. When Ted was involved with make-believe characters related to ancient civilizations, he seemed to be exercising through fantasy the ego-based motive of power. Also among children's ego-based motives would seem to be the ability to do things that adults do and to see oneself as growing up. Penny, as noted earlier, was interested in how she might get to publish her poetry. To her and probably to other writers in the class, one reason for choosing to write is that writing for publication is done in the real, adult world.
Adulthood may also be a task-based motive insofar as it is associated with accomplishing work of excellent quality.

Two aspects of ego incentives, seemingly related to competition but not included by Maehr and Braskamp, are exclusivity and individuality. Although I heard no student statements to serve as evidence, I believe the former may have been a factor enhancing some pupils' personal investment in Mr. Haines's chicken dissection. Only certain pupils were chosen, and others were not permitted to observe. Exclusivity may also have been operating when the teachers selected groups to go on field trips while others remained behind.

Patrick, perhaps the most physically mature boy in the class, seemed to be very concerned about maintaining his individuality and self-image. I provided him the incomplete sentence, "I want kids to know that I'm...," which he answered, "I'm glad that I got my own mind, in the way that I want to dress and stuff: cause people don't tell me how to dress, I just dress how I want."

**Future success as a personal incentive.** In Chapter Two I noted that Maehr and Braskamp considered sense of self to include one's goal directedness. Several children showed evidence of a personal incentive closely related to goal directedness. I call this motive **future success.** On field trips (#37), Gary could be counted upon to ask, "How do you get a job here?" He offered that he needed good grades in order to get into the middle school of
his choice "where they teach you a lot of stuff about how to get a job and everything." Thomas was keenly aware that he would be the first member of his family to go to college. Ann told me, "If you do good when you’re little, you’ll know everything when you grow up." Isaac talked of future income: "When I wanna have some money...I can earn it instead of just asking for it the easy way...earning it the way I will have to, in my future."

Personal Incentive of advancement to higher level. When the curricular organization of a subject is such that pupils progress from one level to the next, there is an incentive to do just that. Advancement is generally indicative that the optimum level of challenge for that student has increased and is being acknowledged. As a personal incentive, desire for advancement in different children could well be related to personal incentives for excellence, competition, affiliation, and/or recognition for accomplishment. Two examples:

--Mr. Haines tells Donita what her next math assignment will be. Meld asks what she’s been assigned and oohs enviously. (#9)

--Thomas says to Albert and Ricky "If you get that test, you get to go to a new level in math." (#17)

Personal Incentive to teach. There were moments when children invested time and effort in the ability of colleagues to learn a new skill or new information, tutoring in a formal or spontaneous way. Instances of giving academic assistance--tutoring--in the classroom will be found in Chapter
It occurred outside of school, as well, as when Clarissa taught the younger children in her neighborhood. Albert's mother reported that when he first learned multiplication he tried to "force" his younger brother to it. Norman helped his friend in the other fourth grade class with her division and, as noted earlier, liked to help his older brother with math.

Parents' willingness to engage in conversation around the facts and concepts of school subjects makes it plausible to the children that they can teach things to their parents and perhaps to other adults. Ann rendered an important service to her family. Having lived in the U.S. for only a few years, her parents were unfamiliar with some American practices. Thus, after a banker taught the class about interest on savings and credit, Ann taught her mother. When Kenneth quizzed his parents on facts from social studies and science, he was teaching. Tina, too, may have felt she was teaching when she brought up at home the facts she learned at school.

Johnson and Johnson (1985) hold that "contributing to others' learning and well-being gives a sense of significance to one's efforts" (p. 250). Maehr and Braskamp (1986) might consider the personal incentive for such an investment to be social concern (sacrificing personal gain for others) or affiliation (sharing affection with others) or perhaps recognition or power over
others. Kenneth may have felt, in addition, some feisty competitiveness with his parents. It would seem plausible that instead or in addition to these motives, a child who teaches might be exercising a social or ego-based personal incentive to do as an adult or, more specifically, a task-intrinsic personal incentive to teach.

Intertwining of personal incentives. Evidence indicated a complex of motives affecting Patrick's construction of meaning. "When some of my friends ignore me I don't like it." He liked math when his friends were around him, otherwise he would get tired and didn't feel like doing it, he told me. His mother told me that last year he complained that girls did not like him. Thus, his ego-based individuality motive seemed to be related to the social motive of affiliation—being and working with friends. He seemed to feel it important to show his physical prowess. He got into fights at school, sometimes with his close companions. Thus, an ego personal incentive of power seemed to play a role.

Last year, Patrick had invested in a geography activity in which students were to cut the African continent into a jigsaw puzzle. He was good at it. Now he adopted that task form, making jigsaw puzzles for himself and his sisters to put together. He told me, "Mr. Haines was proud of me, 'cause I knew how...." He tried to do his science fair project without Mr. Haines knowing, so he would be surprised. These incidents strongly suggest that
adult recognition for accomplishment is an important personal incentive for Patrick.

In some other children the interplay of their motives seemed particularly clear. Victor and Albert spoke of their work in terms of task involvement. This personal incentive seemed to be accompanied by a subsidiary motive of recognition for accomplishment—not as extrinsic reward as posited by Maehr and Braskamp but for feedback and affiliation with adults. Excellence was possibly a subsidiary motive, as well. At school Albert would read them to Mr. Haines; at home to his mother. He told me she would read them to herself, as well, and would usually say they sound nice. She told me she was proud of his poetic ability and that one of his poems appeared in the booklet written by Luminaries students throughout the district. I asked him what he would do if she were not interested. "I would write them for myself and keep them in my writing folder," he said. What did he expect from people the day he gave out photocopies of his poem? "Their opinion," he said.

Victor expected that adults would respond favorably and with surprise when he showed them his writing and that they would take it home, keep it, and perhaps ask for a copy for someone else. Would he still write stories if nobody really was interested in looking at them? He had a philosophical aphorism to deal with an uncomfortable situation such as that: "Well, really, it doesn't
mean anything if they don't look at them. It just matters what you are doing." (Note the similarity to Kenneth's statement: "I don't know if I'm good at it or not, but it really doesn't matter right now, just as long as I enjoy it.") Victor added, "Well, I'd be kind of mad about it." But, he said, he would just not pay attention and write some more. If he were not allowed to keep his papers, would he still write more? Yes, he said, and he would write some over again, adding that he did not quickly get tired of writing. His mother corroborated that he loved doing scary stories, would read them to her, and she would compliment him. She felt he was spurred on by her compliments but agreed that he probably would not stop writing if she discontinued.

Tina, referring particularly to her dislike for writing about what she has read, said, "I try to do what they tell me to, but...sometimes I just don't want to do it, but I do it anyway...'cause I don't like getting in trouble for not doing it. And it keeps up my grades." When avoidance of an aversive situation such as punishment is a salient reason for doing a task, the situation is controlling. It works against intrinsic motivation. In this case, not doing the work would bring unpleasant consequences. However, while a low grade might be one of those consequences, it also seems that good grades are a personal incentive for her. So, to determine whether the task is more controlling or more self-determining, one must inquire
further into the relative salience of the two personal incentives, good grades and avoidance of negative consequences.

Ted is one for whom task involvement is an influential personal incentive. Grades help him to pursue his personal incentive to excel by telling him how well he has done (#104). Also, to him a grade becomes more salient if his work has lately been such that he is in danger of not satisfying his mother. Maehr and Braskamp (1986) have said that feedback should not be considered extrinsic reward if it carries information, either directly or symbolically, about one's social status, work productivity, or approval by someone. Because the approval or disapproval Ted receives from his mother is probably more important to him as an indicator of her acceptance of his actions than as a reward, his concern about her response would seem to show that he is influenced by a social personal incentive.

Children who get intrinsically involved in schoolwork can certainly be influenced by extrinsic rewards:

--Clarissa's mother tells me, "Anything [sic] that there's a contest...she works harder....She'll do it anyway [without a prize] but if there's something to make her move forward, she moves."

--Kenneth comes right out with it: "I love to do stuff for rewards."
Nevertheless, it seems that interest in the schoolwork itself and desire for good grades were of roughly equal importance to them as motives:

--Thomas's parents sometimes give him money for good grades but, he says, he likes doing his work and would do it anyway.

--I ask Freddy if he wasn't doing the extra portion of his explorer report because he liked it? Yes, he says, but with good grades his father will let him join the football team at a recreation center next summer. Would he still want to do the work if there were no football team? Yes—if it were math, especially math facts! Did credit affect Freddy's decision to write a praying mantis report? He says it did not: "I did it because I wanted to do it, and I wanted to do something interesting."

Kenneth wanted good grades. Although the quality of his work was usually high, he was concerned about the possibility of failure. In drug awareness class, he asked how they would know if they were going to pass. When a lawyer who addressed the class mentioned the bar exam, Kenneth asked, "What if you fail?" Of equal or greater importance to him, though, was the intrinsic interest of the work. His remarks quoted in Chapter Four show that he enjoyed schoolwork, especially writing. What makes him put a lot of time and trouble into schoolwork? "[If] I'm interested [and] if it's gonna be a big point in my grade."

Getting credit was not essential to him, but it seemed to acknowledge—to validate—the importance of a topic. (Children's interpretations of the meaning of credit is discussed in the section on extrinsic rewards in Chapter Five.)
Why did Kenneth pick a particular topic to report on? One reason was, "I thought it was a little more challenging than the others." Thus, "interesting" connotes optimal challenge. Another motive important to him is excellence: "I stress, myself, to have no mistakes." But, he said, if his parents and teachers would accept careless, quick work, that is what he would do. "If I could just write it out and just hand it to him, I would probably do that, yeah. Hey, as long as it's easier!" Kenneth's reasoning shows the complex web of personal incentives.

**Conclusion.** Maehr and Braskamp's typology provides a foundation for understanding and anticipating what qualities in the environment a child might find attractive for personal investment, and why. The descriptions here have shown that a personal incentive is not identical from one person to the next. Personal incentives overlap and occur in different juxtapositions, influencing each other differently at different times.

The issues raised here point to elaboration and/or modification of the typology that would give it a better fit when applied to children. Task-based personal incentives can be characterized by fantasy, catharsis, and a striving for adulthood. Ego-based motives can also be manifest as fantasy and may include exclusivity and individuality. Despite the presence of an affiliative motive, competition, grades, other extrinsic rewards, or aversive consequences, task involvement may still be a child's
primary motive for doing a task. Although I have not sufficiently pursued their influence on CM, I have cited instances in which intrinsic interest seems to be complemented, not undermined, by these other incentives. Personal incentives to add to the list should perhaps include future success, advancement to a higher level, and a desire to teach.

Finally, it should be kept in mind that by naming a set of distinct types of personal incentive, one is summarizing and oversimplifying manifold influences upon a child’s self-perception and actions: experience and performance in the distant and recent past, cultural values, the process of maturing, present circumstances, and information about the future. By the same token, other aspects of the person are left out. To classify a piece of music by its rhythm or its tonality is only a small part of appreciating it. Similarly, personal incentive is a construct: not an observable event but an abstraction, a set of filtered lenses through which one can perceive certain regularities and relationships. Awareness of a student’s actions and statements is important to enrich the simple designation of individual motives.

This chapter began with a description of the school and classroom in which CM was studied. Curricula in the various subject areas was summarized and instances of CM portrayed in each. The chapter concluded by speculating as to children’s tacit preferences--motives that may have influenced their choices of
work. Chapter Five will, in effect, take an opposite perspective, to look for incentives in the teachers' actions and in the tasks available for students to do— incentives to which children may be attracted to invest. In comparison to the description of children's work, a higher level of inference has been necessary to attribute motives to their work. Chapter Five will be similarly inferential in its discussion of qualities that seem to serve as incentives for personal investment.
CHAPTER V

SITUATIONS AND PERSONAL EXPERIENCES IMPORTANT TO
CONTINUING MOTIVATION AND OTHER PERSONAL INVESTMENT

David McClelland, a motivational theorist whose work has
influenced both Maehr and Deci, distinguishes between motivation,
or impulse to act, and opportunity. Both, he says, are necessary
if a person is to act (McClelland, 1985). While I do not mean to
suggest that circumstances that foster motivation and those that
comprise opportunity are mutually exclusive, separate discussions
of opportunity and incentives form the main divisions of this
chapter. The first two main sections are concerned with personal
investment in the classroom from the point of view of
opportunities; the remainder deals with personal investment in
terms of the concept of incentives.

School Opportunities That Facilitate
CM and Other Personal Investment

Among the elements that pupils derive from a situation and
experience as meaning is the set of possibilities the situation
presents and suggests for action (Maehr, 1984; Maehr & Braskamp,
Deci and Ryan (1985) have said very much the same thing, using the idea of "opportunity:" "The ambient opportunities that are available to offer optimal challenges are important in one's developing preferences.... Furthermore, children tend to use affordances of their environment to do the activities that they observe to be socially valued" (p. 128). In other words, for an action to be possible, a child must be in a situation in which there is an opportunity to carry it out. To be a plausible option, the action must be acceptable to oneself and appear to be acceptable to those whose opinions matter.

What comprises an opportunity to continue schoolwork on one's own? In other words, what kinds of affordances in their environment help children to consider certain actions to be possible and plausible? One way of approaching these questions is to draw upon a particular definition of instruction. Instruction can be conceptualized as an arrangement of four kinds of resources--time, materials, space, and persons--to facilitate learning by others or by oneself (Hough & Duncan, 1970; Hough, Duncan, Belland, & Siders, 1980; Belland, 1985). I would propose that the availability and configuration of resources from those same four domains affect the action possibilities students derive from their environment. Maehr (1984) theorizes that "there are at least [emphasis added] two aspects of the teaching-learning situation that affect the meanings held by the persons involved: social expectations and task design." The sections to follow will
show that resources comprise a third. They describe the time, materials, space, and persons available to the students in Room 9; and they ponder how the availability and configuration of these resources broadened or narrowed the range of action possibilities children might perceive there.

Time is probably the most obvious resource necessary for opportunity to exist. At home, although there are demands placed by parents, and there may be homework, children tend to have a good deal of unstructured time. In school, where so much of the day is planned, there tends to be less. Whether there is time for CM in school would seem to depend on several broad characteristics. One is how busy children are kept, including the amount of work they are required to do and the ease or difficulty each may experience in completing it. Another time-determining characteristic is autonomy: how much and what kinds of self-determination are accorded them as far as selecting tasks to do (which ones and how much), staying with tasks to completion, and interacting with peers (i.e., how, when, and with whom to work or talk)? Pupil autonomy is examined later under the heading of Incentive Environment.

The presence or availability of persons can help to create an opportunity. At home, there may or may not be children--the same age, older, or younger--in the family or in communities to which the family belongs. Adults may or may not be present in the home
to facilitate CM. In school there are, of course, plenty of peers and knowledgeable adults to depend upon for cooperation or assistance. Another sort of resource that contributes to opportunity can be called materials. Schools are set up with various material resources--some common, like paper and books; some unusual, like computer communication--that a child might use for an independent activity. Outside of school, children can encounter a world of material resources, man-made and in nature, including some customarily used by adults.

Lastly, a resource available in varying degrees in school and out is space. Opportunity may require space in a physical sense (e.g., a tabletop, a field) or personal space (e.g., a room, a corner to oneself). Personal space implies, as well, a time not to be disturbed. Special events, such as a schoolwide fair or holiday celebration, and field trips, such as to a civic building or an arts event, offer wholly different sets of opportunities in all four dimensions. For such events, spaces outside the classroom are utilized; time is used during the school day and sometimes in the evening; other materials and persons are incorporated.

The sections immediately to follow examine resources that might affect opportunities for CM in Room 9. In a later section, attention is given to resources available to the children outside of school.
Availability and Use of Time

How busy pupils were. There seemed never a lack of required tasks to be done or options from which to choose. Tasks could be convergent: define some words, read a set of textbook pages, or write some exercises. More often they were rather more divergent or expressive: write a story, create a list, design a diorama, draw and label an animal, finish reading a book and write what interested you about it. Pupils often had to judge for themselves how lengthy their product should be. Although one's daily schedule might include four or five tasks to do, individually or with partners, the teachers did not ordinarily press pupils to finish an assignment by the end of the morning or afternoon. They treated their pupils as capable of taking responsibility for doing their work. Notwithstanding the comparatively high degree of movement that generally was occurring, the pace of work in the room usually seemed more relaxed than hurried or harried.

In the wide range of ages, intelligences, and competencies in this class, there were pupils who struggled to do a minimum of reading, math, writing, or oral expression and pupils who found one or more of these areas much less daunting. When classroom tasks were not done, the teachers tried diverse methods to make requirements more achievable: temporal modifications such as fewer requirements or longer deadlines; or spatial adjustments such as occasionally assigning a seat. Mr. Haines said, "...a
major expectation of our program is that I want kids to be able to go and make personal choices and to complete them...." Daily requirements and overdue web assignments not completed at school were generally supposed to be finished as homework, and writing these items into homework logs at 3:15 was a sometimes ritual. But the teachers expected that students who did not do this homework willingly would not do much more if harried, so in most cases, except for math contracts, work not completed during the day was not done at night.

The teachers' flexibility in the time they allowed for completion of tasks frequently resulted in a lack of firm, proximate deadlines. Despite the fact that the children were allotted several days or weeks for some assignments, many were never completed or handed in. During a trip to the history museum, for example, a dittoed timeline was to be filled in with about half a dozen events. Nearly two weeks later the timeline was still not overdue (#70). Mr. Haines talked about his reluctance to exert pressure to get work completed:

It's...the problem I always have with deadlines. We set the deadline on the book extensions....But for some of those kids, they have gotten so into those that I always feel a little twinge of guilt in the back of my head that we're shutting off exactly what we want when we say to them it's got to be done next Friday...and...with reports and stuff the kids are writing....I tend to fudge on deadlines real bad.

Other than math contracts, the teachers generally did not give assignments specifically for homework. At times, work not finished in class was to be completed at home, but there did not
seem to be a firm rule about doing so. Reminding the class to take work home one afternoon, Mr. Haines sounded almost apologetic (61): "Please feel free to do something at home this weekend or tonight."

Kenneth was concerned about having enough time to complete his work and do it well. For example, he asked Mr. Haines what to do if one of his lengthy stories could not be completed before the end of the grading period (8). Regarding a report he wrote about the Soviet Union, he told me he was satisfied with the job he did but would have gathered much more information if allowed to spend another week "and give it my all." In contrast, he had had difficulty completing the earthquake project begun with Gary several weeks before. Although Kenneth seemed diligent and better able than many of his peers to carry out a plan, to effectively plan his use of time over a week or more was apparently difficult for him nonetheless. His plans for extended work may well have been running up against a loss of salience—that is, a loss of sense of immediacy. It is unclear to what extent the challenge he faced should be attributed to his attention span or ability to gauge his time or, on the other hand, an excess of assigned tasks that intervened.

Mrs. Gregson believed that more work would be completed and turned in if deadlines were more salient. I would agree. It appears that with the lack of proximal consequences for delaying
work or not handing it in, there were pupils who felt that they could avoid a task for days or weeks. Mrs. Gregson felt that a work chart, with everyone’s name and stars given for task completion, was one way of creating that salience (#22). (Their use of a work chart is discussed later in this chapter in conjunction with work incentives.)

In a study by Amabile, DeJong, and Lepper (1976), college students who worked on word puzzles under a deadline were less likely to continue later on their own than were students who were given no stated deadline. The deadline appeared to make an otherwise informational task controlling. While initially this study might suggest that CM would be less likely if deadlines in Room 9 were to become tighter, there are many task characteristics (e.g., content, complexity of form, other incentives), person characteristics (e.g., age, personal incentives), and other classroom factors that would influence pupils’ interpretations of the deadline.

**Periods of the day.** The daily practice of going over the day’s plans as listed on a chart did not seem to have any influence on the personal investment of the children. The practice may have helped students who anticipated continuing or otherwise investing in activities of their choice to organize their time to do so. It is possible but unlikely that students, familiar with the flexibility in this class, would feel
constrained by the schedule chart. No evidence of either kind of thinking was noted.

Although interviews did not usually probe for the period of the day a child engaged in a resumption, the kind of task resumed was often indicative of when it would have been carried out. The periods when children tended most often to re-enter topics or task forms that were no longer required were afternoon work time (web time), morning work time, and sustained silent reading. During the work times pupils generally could choose among sanctioned tasks. Sometimes that choice was quite circumscribed and surveillance was tight; other times the choice was wide, divergent activities more readily admissible, and enforcement relatively easygoing.

Extra work focusing on social studies or science topics was generally done during afternoon work time. Pupils occasionally showed CM in the topics they brought up during daily circle meetings. For example, Thomas briefly expounded before the group on his position on an environmental issue the class had just encountered on its trip to the aquarium (#44). Pupils seemed most often to be writing stories on their own during the morning work times that often followed writing workshop. The half-hour silent reading period after noontime games was when students most often re-entered class topics by way of reading books. The form of their task was set, but they could choose the content. During
bad-weather recess, academic topics were sometimes re-entered through geography- and math-oriented games. Perhaps not surprisingly, the time one chose to take advantage of CM could be illicit, as when Patrick took up an old art activity in the midst of a social studies presentation. Some students may have read books when they were supposed to be doing other classwork, but I did not record any such instances.

Last year, Mrs. Gregson had tried to set aside time solely for children to pursue their own interests. "But," she said, "I got so pulled by what the curriculum said you had to be doing....You felt time constraint....fitting in everything that’s required curriculum-wise.... We’re too bound by the curriculum sometimes." This year, too, she would have preferred the freedom to do that. But she felt the same constraints, augmented by weaknesses in basic skills that she perceived in some pupils.

**Interstitial time.** Opportunities for CM existed near the end of some activities and in the interstitial moments between activities. In those brief moments a child could read a few lines of a book or ask a teacher, "Can we do this some more?" Worksheets and graphic tasks with little apparent purpose—the busywork rampant in many schools—were opposed by the teachers and appeared only on rare occasions. In transitional moments, Jackie asked a teacher for a book; Tanya continued to twirl her dress on the way back from drama class (#19); Norman went up to ask the
visiting lawyer another question as he was leaving (#30); and Bonnie asked Mr. Haines if he would talk about ancestors again sometime. Ted said, "I usually just sit and draw, or I read a book." Freddy, too, reported, "I sit there and draw pictures" or he talks to people. Both boys considered themselves good at drawing.

There are many ways in which one activity can transition, or be articulated, to another. When work time is drawing to a close (and providing it has not already been interrupted by another scheduled activity), students either complete their work as time runs out, put it away to be finished sometime later, or complete it before the time is up. If this last case is true, it may be possible to do a number of things in the time that remains. Upon concluding a task with time still remaining, students in this class sometimes directed themselves to unfinished compulsory daily tasks or those listed on their webs; sometimes they ignored those requirements and socialized, especially when the teachers were not watching closely; and sometimes they took the opportunity to resume something on their own, whether required tasks were finished or not.

—Victor: I like writing and stuff. When I'm not doing anything I just go and write a story.
Author: How come you choose to write when you could be doing something else?
Victor: Well, sometimes when I finish all my work I just write--something.

—On a day late in the school year, nearly everyone is making geometry constructions out of cardboard shapes. Many pupils
are walking around and sharing. The atmosphere is almost boisterous. Patrick and Dion finish their construction with time to spare and are extremely pleased with their products. In virtual celebration, they leave the room and take a walk through the building. (#103)

These two boys could not have been counted on to resume some other task, especially when there was so much activity in the room. Yet, their engagement was such that if there had been a further geometric activity to begin, building upon the first, they might well have done it. It appears, though, that they did not see any further action possibilities in the room. Whether they brought their constructions along with them, showing them to people to garner recognition is not clear. I do not know whether they had opportunities to do related work before the year ended.

Both teachers felt that after a year or more in the informal program the majority of children had grown significantly better able to make independent decisions as to the use of their time. Still, the teachers often specified or implied what to do when a task was finished, making resumption of a task of one’s own choosing seem unlikely. Some examples:

--Most of the class is working on their papers for the drug awareness program. Mr. Haines announces, "About five minutes left, folks. If your paper is done, you can work on your journal entry." (#13)

--It is suggested that anyone who gets all his/her work done and is a "super student" do an item from the "Work to Get Our Room Looking Great List," which contains chores and special tasks such as material preparation. (#3, 13)

--After he has presented a math lesson, Mr. Haines suggests, "You may talk quietly for a little while." (#8)
—Each group of students is at a science center to do the task there. There seems to be an expectation that they stay in their groups, and there is no other assignment at the centers, so pupils who have finished early (and those who have put in no effort) just talk to each other. (#50)

—Mr. Haines calls out a reminder, "It is now official reading time. Take out your official reading book and log." But before five minutes have passed he calls the class back to circle. "What time of day is it?" A student answers correctly. "What does that mean?" Another student answers. The teacher repeats the answer. "We write something about the book in our log, then we do one of the extension activities....We hope before long you'll make the change automatically from silent reading of your choice to the literature period with your assigned book" (#7). (After the year is over, he re-emphasizes to me his regret at interrupting pupils' chosen reading.)

These examples were exceptions, though. As a rule, children were given many opportunities to make responsible decisions about what to do, including: the long periods for individual and cooperative work, freedom to work in the library, freedom to go to the rest room, distant deadlines for assignments, and no reminders when it was time to leave the room for lunchtime jobs or instrumental music lessons.

Only occasionally were groups of students kept waiting in their seats without an assignment:

—Waiting for half the class to return from fire drill practice and the restroom, some pupils quickly pick up nearby books to read. (#2)

—With the group sitting in a circle and no task to occupy them, the teacher calls on individuals in order to straighten out some records. This takes quite awhile. Several boys get up and stand around talking, joking, and aimlessly breaking pencils and pens. (#10)
Once in awhile during an interstitial time, one's preference to invest in a task might well be overcome by the presence of extrinsic reward. For instance:

--This afternoon, for those who have finished a certain task, a computer game is available. Some pupils are attracted to it. (#27)

**Institutional interruption.** Individuals and groups had to leave the room for arts or other special classes every day, often interrupting pupils' work in progress. As Thomas put it, "If I'm doing something important in the room, they'll still come get me." Although the teachers favored the concept of special help in special areas, they were concerned about depletion of their teaching time and their pupils' time to do classwork. Mr. Haines stated it this way:

What they do tends not to have any relation to what I'm doing in my room. As much as we try and coordinate what's going on [among the arts teachers] with what we're doing in the room, it never is in synch with what we're doing....I would think they would say they are covering their objectives, and what they're supposed to do....[The play they are preparing] is just sort of being thrown on top of everything else that's going on in the building. It really has no relation, then....The only way [it] is going to match at all is because Nellie and I went out and searched for something to connect to it.

If students left early in a work period, it might still be going on when they returned, allowing them to resume their work for awhile. Often, though, a different activity was in progress, so they could not resume until later or the following day.

A secondary source of institutional interruption was the schedule in the classroom. The teachers organized most days to
have blocks of work time, sometimes as long as two hours. But there were points in nearly every day when they asked students to stop one kind of work to do another. Here are instances of both kinds of interruption:

--Norman has been working for over an hour at a map and is still intently focused, but he has to put it away for readaloud time. (#17)

--Albert has been reading an encyclopedia entry about Armenia with surprising persistence despite its conceptual unfamiliarity. A call to go to his Chapter One class interrupts his progress, and he does not return to the topic. (#30)

--Timothy is very involved filling out an interest inventory. When interrupted to do a spelling diagnostic, he careens frenetically around the room. (#3)

--Tina’s father tells me, "She seems to have a time problem. She seems to feel like she’s hustled around too much and doesn’t have time" to eat lunch, to clean up, to do this and that. "The school day races for her. Everything has to be done (snap) so fast. This gets her down....[It’s] one of the few things she ever complains about at school...."

Reluctant to switch when many students were diligently working, the teachers indeed let an occasional pupil continue while everyone else moved on.

Summary. There were substantial blocks of time in the school day when one could become intensely involved in a task or take awhile to resume an activity of one’s own accord. The splinters of time available on completion of an activity also supported some personal investment. Specific instructions sometimes restricted students’ options during work times. Flexible deadlines probably helped to make unassigned work a viable option but resulted in
some assignments not being completed. Some CM emerged during class discussions and teacher presentations. Students' involvement in their work was prone to interruption by the obligatory moves to arts and special classes at other rooms and by shifts to other subjects within the classroom. But being sensitive to the value of uninterrupted work time, the teachers minimized intrusions to the extent that they were able.

Accessibility of Materials

Certain material resources, especially if readily accessible, would seem to embody opportunity for CM. The teachers kept the open shelves and tables very well stocked with reading matter: fiction and non-fiction books relating to current curricular topics, popular children's literature, textbooks of several grade levels, *National Geographic*, and similar magazines. Many of the books were borrowed by the teachers from the school and public libraries and were traded in as topics of study changed. To keep the books fairly orderly, a student had the job of straightening up the shelves at the end of the day. The school library itself seemed well stocked. In addition to pupils' personal writing materials, an ample classroom supply was kept out in the open: pencils, pens, erasers, different qualities of paper for rough drafts and final copies. They were considered community property, and enough were available that there were few disputes over
possession. Computers were used for writing and will be mentioned below.

In some classrooms, despite the appearance of abundant materials waiting on open shelves and overflowing from cabinets, there seems an unspoken, understood rule that they may only be removed on infrequent occasions and/or only by the teacher. That was not the case in this classroom, where pupils were generally welcome to take whatever reading, writing, or art materials they needed. A variety of art media were in good supply, including construction papers, crayons, paints, markers, scissors, glue, rulers, and corrugated board. Although the children did not have direct access to the office machines, permission was usually granted to have their creations photocopied or laminated if they asked.

Plants, animals, and their small habitats were in full view and reach for petting, feeding, and watering; but much of the science equipment was not easily accessible, stuffed together in closed cabinets. Microscopes, slide collections, dry cells, and electrical circuits, for example, were not brought out for exploration. Science equipment was taken out only for teacher-led lessons, web-related activities in carrels ("science centers"), to help someone's science fair project, or perhaps by special request.
A map center was usually open for use but mainly as a guided activity in which pupils followed instructions, marking plastic-surfaced maps with grease pencil. An atlas or two were on the bookshelves. The room was not equipped with large pull-down maps; *National Geographic*-type regional maps were occasionally posted. A geography-oriented game was available.

Manipulable math materials such as dominoes and unifix cubes were displayed on a set of open shelves beside more abstract materials such as flash cards and plastic multiplication answer boards. These items were suggested for use during indoor recesses and breaks. Various math textbooks were available.

Computers were not essential components in the curriculum here. Two Apple IIe computers and an Apple IIc, usually equipped with single disk drive, and two printers were in the room. The IIc was not always in working order. There were disks for several different word processing programs. Although not well aware of the differences among the programs, students chose one and stayed with it so they could store their writing on a single data disk. These data disks and program disks were sometimes kept within reach of the computers and sometimes at a teacher's desk, either standing in a disk box or lying near the machine. Several drill-and-practice games, mainly for keyboarding, math calculation, and basic logic, were available. A few simulation games such as *Oregon Trail* and *Where in the World is Carmen*
San Diego were present, but disks for other than word processing were off-limits much of the time. There were no art-oriented programs in the room, but now and then children would use Print Shop on one of several IIE's in the library to create a book cover. Most pupils knew only the minimum necessary to operate the computers and printers, so the teachers and I were called upon to assist. Pupils who knew this or that about them were generally not displeased to leave their own work to help.

A classroom can contain only a finite amount of materials. A list of materials not present that might tend to promote CM in this or any classroom—from carpentry tools to electric circuitry, textiles to Montessori puzzle maps, creative drama activities to tape recorders—would be infinite. On the whole, it seemed that the wherewithal for independent resumption of forms or content here were abundant in terms of reading matter, writing materials, and supplies for graphic expression; science and math materials and maps seemed rather limited or with access restrained.

**Availability and Use of Space**

In the large, double classroom, the teachers took advantage of the movability of the furniture to accommodate work areas, groupings of students, visiting speakers, and displays as necessary. Students found personal work space under tables, in corners, behind cabinets, and among the coats, in addition to tables, carrels, and the middle of the floor. At tables, few
seemed annoyed when a peer's work space overlapped their own. When the furniture and people working on the carpet formed an impassable maze, neither children nor adults were heard to object. Chalkboard space was at a premium, as charts and pictures partly covered them. Teacher presentations created a spatial problem when a large group would sit close together on the carpet, some pupils sitting awkwardly or in positions from which the limited chalkboard space was partially blocked by the teacher or the furniture. Permission to work in the library was liberally but scrupulously granted.

Most pupils had ample space to keep their belongings, materials, and projects in their cubby trays, on counters, tables, shelves, or cabinet tops. Besides their store-bought loose-leaf-type notebooks, they were given folders—manila, pocket, accordion, etc.—to help keep their various tasks and projects organized. Of course, some students kept theirs well-arranged while others seemed hopelessly disorganized. All were welcome to find space on any of the walls in the classroom or the nearby hallway to post their finished work.

It seemed that at times the room's unique arrangement and contents were encouraging its inhabitants to invest further in the subject matter surrounding them. Recall that the year was divided into three main themes: Togetherness, Journeys, and Reflections. At approximately the beginning of each theme, much of the
furniture was rearranged, creating new spaces and new lines of sight. With a new set of books placed on the shelves, the room underwent quite a transformation. It seemed to become a place just for being involved in the topics at hand, especially during the final unit. By the time the unit was nearly over, the room had been converted into a museum of ancient culture with model pyramids standing on tables, sheets of hieroglyphics covering the walls, and a roofed alcove housing a pharaoh’s tomb. The unit culminated with children and parents from all over the school visiting their museum as part of the schoolwide World’s Fair. The experience of their surroundings being rearranged would seem to tell children that to make changes in the configuration and ambiance of one’s physical environment to meet one’s desires and needs is a plausible option.

Roles of Adults as Resources

Like time, materials, and space, persons as resources affect one’s perception of possible actions. More than those other resources, though, the adults and other children in a situation can influence a child’s perception of what actions are acceptable, or plausible. Of course, persons in the environment are not simply resources. They are crucial contributors to the social expectations there. In this section, I discuss aspects of the adult presence from the viewpoint that adults are resources. In the main section that will follow, I examine the meanings brought
about by interchange with other students. Peers act both as resources and as determiners of social expectations in the classroom. Later, under the headings of Teacher-Pupil Relationships, Flexibility of Teachers, and Classroom Management, I deal with adult roles in determining social expectations.

Adults in a school, as sources of information and inspiration, can do much to bring an activity into the realm of possibility and make it seem appropriate for children's personal investment. The teachers of Room 9 were generally quite willing to supply information to their students, help them find books, and locate other persons for assistance. Mr. Haines was well versed in children's literature; Mrs. Gregson was especially conversant in science. The full-time library aide was friendly and knowledgeable. The art and movement (physical education) teachers, among others, seemed approachable, available, and willing to assist. Half a dozen children who expressed interest in composing their own music were given special instruction and creative time with keyboard instruments by the music teacher. For each child doing a science fair project, the teachers attempted to obtain an adult to be a mentor but met with limited success.

Adults often provided inspiration or, at least, a look at plausible action possibilities of which the children might not otherwise be aware. The school's disciplinary aide modeled a real-world skill, composing a glorious song for the Martin Luther
King Day assembly, teaching the children to sing it, and leading them as he played keyboard in accompaniment. The instrumental music teacher occasionally showed off his performance skills. A mother guided the class through the museum where she worked. A grandmother shared her experience living in a foreign country. The author showed that one can write a book in a cluttered room with a big easy chair. The polar explorer who was also a student at a nearby university proved that young people can really have high adventure. Touching a penguin, being splashed by a whale, and talking to people who handled them at the aquarium brought reality to the possibility of working with wild animals. The visiting lawyer, banker, and teenage gymnastics troupe from Denmark, as well as adults encountered on field trips introduced other new possibilities. The courthouse visit with its simulated trial connected pupils’ classwork to their vicarious TV experiences. On that trip, Ted would have preferred even more reality:

That courthouse [the courtroom of the simulated trial] was sort of fun....It seemed sort of interesting. But when I went into the real courthouse [a brief visit to a room where a trial was in session] everything became pretty confusing....I didn’t know what the charge was or what was happening.

The poet demonstrated in person that poems are written by real people. To Penny, being taught by the poet was a start, but more time to talk with him might have been highly beneficial. She told me that her parents said she would not be able to publish her writing until she got older. "I’m not sure [how to publish
something]. I don’t even know how you become a poet. I want to do that....I didn’t ask [the poet how.] I didn’t really have time."

There seemed to be many chances for the students of Room Nine to conclude that the topics at which they were working were things that really happen. Through skilled adults, special events, and field trips, children experienced contexts in which knowledge and skills learned in school could be used. Condry (1978) explains a problematic circumstance, common to schools, that Bruner in 1974 labeled decontextualization:

Abstract...skills are taught in circumstances far removed from those in which they will be used and by persons with whom the "student" typically has little relationship....The central problem in a system of decontextualized education is "motivation"....In short, when skills are learned "in context," in the environmental niche in which they are relevant, the motivation for acquisition is "intrinsic," i.e., a primitive desire to explore and master the world of one’s immediate surroundings. Skills so learned are sharpened by a desire for competence. (pp. 185-186)

Their momentary participatory views inside real-world, adult activities are certain to have expanded the children’s pool of action possibilities, if not for the current school year then for the future.

One important aspect of persons as resources remains to be explained. However, now that the four kinds of resources have been discussed, it is appropriate to describe the demise of one
promising project, to demonstrate their combined influence on personal investment:

--Abstract paintings, begun with extraordinary responsiveness to elements of composition introduced in art class two weeks ago, have been sitting in the classroom incomplete since then. Some pupils have returned to their painting but halfheartedly so. Mr. Haines now allot s an hour for it. Some children are using wide brushes and finding their designs too elaborate to paint accurately. Others such as Victor, rather than completing their designs, seem to have lost the thread. He proceeds with a totally different concept, painting over his original design with far less sensitivity.

Mr. Haines is quite upset with their behavior, the quality of their work, and the paint they have dripped on the carpet. At the circle, he asks why they have given up and slopped paint on their pictures. He asks how many thought the assignment was too hard. (#19)

But hard or easy is not the point. Personal investment in this project apparently fell victim to a number of interrelated resource problems. One problem was a function of the passage of time. The task seemed to have lost its immediacy: the action possibilities and incentives the young artists had been finding in the task had probably faded from salience. A second problem was a matter of materials: many of the brushes available were inappropriately wide, preventing students from continuing their precise work. A third was adult supervision: the art teacher was not present to help pupils regain their original intent. A fourth was that ample protected workspace for use of paints had not been allotted.

Summary. In addition to social expectations and task design, the teaching-learning situation is also comprised of resources.
Resources seemed to be important for personal investment in Room 9. There were blocks of time in which students could get involved in their work. Teachers tried to minimize interruptions to that investment, and they made allowances to give pupils time to finish their work. Pupils were generally not required to wait for instructions before proceeding to their next task. Incompletion of assignments did not preclude permission, tacit or overt, to pursue independent work. A wealth of reading materials and plenty of supplies for writing and art were readily available. There were a variety of spaces in which to work, in the open with others or in relative privacy. Occasional reconfigurations of furniture and instructional materials helped to keep the atmosphere novel and reflective of the topics being studied. Their classroom teachers and others helped pupils find what they needed. In the building and on field trips, various adults demonstrated real-life skills.

Resources were not without limit, though. Children at their work were interrupted to go to other classrooms. Deadlines that were neither close nor rigorously enforced allowed children to let their work slide. Materials for science were not readily accessible to pupils; access to math materials was somewhat limited; and there were no large-scale pull-down maps that could be unrolled for quick reference. For some teacher presentations, the chalkboard was partially blocked, and children were cramped as they sat together.
On balance, the four types of resource--time, materials, space, and persons--were made available to students in ways that would seem to encourage personal investment, including CM. With regard to time, however, a higher order of personal investment might have been attained had the teachers felt less constrained by the district's curricular requirements from encouraging pupils to spend time following their own interests. At the same time, there is a question as to whether motivation in the children whose skills in math and language are far below "grade level" would benefit more in the long run from freedom of choice or from intensive instruction in their areas of relative weakness. This issue is broached later by Mrs. Gregson, in the section entitled Choices as to Tasks.

Persons close to one's own age are a resource that can affect opportunities for personal investment. Because a relatively high level of peer interaction was sanctioned in this class, considerable attention is paid below to the possible influence of peers on personal investment and CM.

Peer Roles in Personal Investment

Cooperative learning. A teaching-learning situation, which Maehr (1984) deems a major contributor to students' development of meaning, can be examined from the aspect of its social organization (Blumenfeld et al., 1987), or more specifically, its
goal structure. According to Johnson and Johnson (1985), classroom goals can be structured to be either: (a) individualistic, whereby students are discouraged from being interdependent; (b) competitive, whereby students interact in opposition and are negatively interdependent; or (c) cooperative, whereby interaction and interdependence are positive. Johnson and Johnson (1985) explain that because past and present interpersonal relationships and influences are essential when students determine their aims, the classroom's goal structure is very significant. These authors refer to the importance of those interpersonal processes for bringing about motivation to learn in compulsory activities. Maehr recognizes, in a broader sense, that those processes are essential contributors to meaning and consequently to personal investment, including CM.

Cooperative learning is today a popular notion. Slavin (1984) notes that the main reason for implementing cooperative learning methods is to influence peer norms to favor high achievement, particularly in upper elementary and middle school, where the sociocultural context tends to oppose achievement. Slavin (1989) describes diverse ways that cooperative learning is helpful. Permission to work together can be an incentive that attracts students to academic work. A cooperative goal structure takes advantage of and promotes groupmates' caring about each other. Maehr and Braskamp (1986) associate this caring with a person's personal incentive for affiliation.
If tutoring occurs, Slavin continues, both the giver and receiver benefit from the cognitive elaboration. Memorization is facilitated by taking turns with one another. Group self-management frees the teacher to attend to teaching. Working cooperatively exposes students to ideas and behaviors they might not experience working individually. Expanding on this last point, Johnson and Johnson (1985) cite evidence that epistemic curiosity, or motivation to search for more information about an object of interest, tends to be significantly enhanced in cooperative learning situations (true, effective ones, that is), because disagreements over content--facts, theories, opinions, conclusions--arise more frequently and are handled more effectively than in other arrangements. The Johnsons also find that cooperative structures tend to promote task persistence.

Southside Elementary School's printed philosophy statement--actually a long list of characteristics and aims--does not include cooperative learning per se but alludes to the notion in several ways, i.e.: "children...work together," "teachers and students team together to form 'learning communities','" "inter-responsibility," "teach students the skills necessary to resolve conflicts," "peer tutors," "peer reading," "small group projects," "small group contact," "open communication among...students," "student leadership," and "learning noise." Cooperative learning is also implied by the terms "whole language approach" and "informal education" in the statement.
Teachers' reasoning regarding peer influence. From the very first day of school, the teachers frequently encouraged pupils to feel free to communicate while working. Cooperation was enabled by giving pupils options as to which tasks to do, at what times, at what places, and with whom. Mr. Haines said to the class (12), "It's especially good if you work with someone who needs help." He observed to me that friends often strongly influence each other to reject tasks suggested by the teacher. He recognized that that may hinder personal investment, but he emphasized his conviction that this negative influence is balanced by children who become interested in a task or topic when they see another child working at it, especially a friend sitting at the same table. For him, the scale is tipped toward group work because it provides opportunities to learn to work together, especially for children who experience much conflict outside of school.

Mrs. Gregson felt that allowing peers to communicate freely would encourage them to use their free time to pursue topics that interest them. Seeing their friends working on a topic--cars, let's say--or coming out with a product, students would want a chance to work on their own interests--castles, for instance. She also considered it valuable that the younger children be tutored by their older mates and be privy to their experiences through conversation.
Coincidentally, in characterizing the positive role that peers may play, both used the verb "to drag." Mrs. Gregson said:

Sometimes some of the good stuff that comes from the kids that have good self-esteem, that have real good attitudes about school, it rubs off a little bit on them....It can work the other way, too. But if primarily the majority is being positive and have a positive attitude, the other ones kind of get drug in.

Mr. Haines said:

There are some kids that get dragged into things--I use the word drag in quotes--dragged into things that they would not normally do on their own, because the people they're sitting with are getting involved.

Peers Enhancing Interest, Investment, and CM

Pupils often consulted their classmates for help before checking with the teachers:

--"First, my smart friends, and then teacher," says Rosa.

--Judy says, "I either listen to [the teachers], and if I don't understand I ask someone else, and I either read their papers or I sort of get the point."

Classmates provided feedback:

--"When my friends say, 'Aw, gimme the answer,'" Frieda explains, "then I know I'm really doin' a good job, cause they all wanna look off my paper."

--Thomas likes to "trade" drawings with classmates: he shows them his drawings and they show him theirs. But, he notes, some people won't because they say they "hate" their drawings.

Sometimes when students invested themselves in an activity collaboratively with peers, the collaboration seemed significant to the investment. Peer collaboration occurred in many varieties. It could be two or more pupils working together over several
weeks, as when Margaret, Sally and Andrea created dioramas to illustrate books they had read (#17); or an intense half hour of research, as when Albert and Patrick gathered and shared knowledge about praying mantises, in the library (#6). (This incident is detailed later in this chapter.) It could be a partial collaboration, as when Dion agreed to draw something for Abdul and Gary on a poster the latter two were making (#103). It might be to talk sociably, as when three of the less academically oriented boys joked while each created an excellent drawing for his web (#4). It might be only a single piece of assistance, advice, or encouragement:

--Having been absent yesterday, Donita is sitting glumly with yesterday's geometry worksheet. She has asked Thomas for his notes, but he does not have them. Rosa overhears her plight. "You can ask Andrea," she suggests. (#17)

--A friend coaxes another: "LaRhonda, you done with your math contract? We gonna get another one tomorrow." (#17)

--Jay helps Timothy by turning the vertical hold on the computer. (#23)

Instances of CM could coincide with informal cooperation, as when Kenneth and Victor talked over the phone about stories they were writing on their own.

A more formal kind of cooperation was peer tutoring, which was sometimes done at the request of a teacher:

--Mr. Haines has word processing disks that have to be loaded into the computers. He asks, "Who knows how and can help others get started?" (#4)

--Estelle, a third grader who read fairly well, tapes a story with LaRhonda, a very weak fourth grade reader. (#12)
--Dallas, a fifth grader who scored in the mid range in math, helps Thomas, a fifth grader who scored low, do a geometry worksheet. (#18)

--Kenneth, a fifth grader very able in language, assists fifth grader Tanya by dictating a spelling inventory to her. (#5)

--Joey is sitting on the carpet in the hallway, listening to a child from a younger class read. "I'm a reading buddy," he tells me. (#28)

Tutoring such as this was not so common, however, as one might expect in a multi-age class. There appear to be several reasons. Tests were rare, as was direct instruction in spelling and reading skills, and there was not much compulsion to move rapidly through math, in which individuals progressed at their own rate. There seemed little pressure from the teachers to master skills at a particular pace. In the integrated curriculum, skills were meant to be encountered in the course of meaningful and sometimes complex activities, at times several skills at once, rather than singly. So, older or better students were not often called upon to tutor or test others. There were few overt distinctions between the requirements for pupils by grade level, so fifth graders were not necessarily experienced in work being done by third graders and, hence, not automatically able to tutor them.

When one child tutored another spontaneously, that was an instance of CM. It might occur in the course of other sorts of collaboration or, as in the following instances, quite separately:

--Ricky tells me he is concerned about spelling on a story he is writing. Gary overhears. He comes over, offers to help,
and suggests that Ricky come over to his house to do more. (#48)

—Some people have been required to stay inside after lunch to finish tasks. Rita, a third grader who is a weak reader, is trying to handle a book that looks to be beyond her independent level. Fifth grader Penny sees her plight and offers herself in a very kind manner.

Penny: Do you need some help with your work?
Rita: (with gravity) Please.
Penny: Have you read a myth yet?
Rita: No.
Penny: I know a real short one. It's the best story in the whole book. I suggest you read....

Penny finds the page and shows Rita the questions she has to answer. Penny seems willing to continue to help. Mr. Haines sees that she has helped Rita, but unfortunately he does not seem to be aware of their very serious attitude. He asks Penny to round up some other children. (#100)

For children's interest, personal investment, or CM to be enhanced by their peers, cooperation was not essential. Often, pupils simply liked to work in the presence of others. Penny said she prefers the security of parents or competent friends when she worked, in case she might need help. Ann's father was aware that in addition to enjoying the company of friends, she learned from them the language of this country. Kenneth considered himself to be working individually but felt that he "centers in" better when there are friends or family nearby with whom to ask a question, chat, or pass along a joke. To work collaboratively, he chose people with whom he could "communicate"—people whose ideas were "in the same ballpark." He did not want it to happen that one person wants their project to be a painting, another wants it to be a description, and someone else wants to do a poem or rap. Clearly, he preferred co-workers who wanted to use the same symbol
systems (Salomon, 1979), or forms of representation (Eisner, 1982), as he. He felt that he and his close friends were good at helping each other find information.

Seeing one's peers at work could spur one's interest. Benjy, who was working in an Egyptian group, might not have become interested in the Mayans or Aztecs had he not seen other pupils doing interesting things in those groups. Although Eddie was not a prolific reader, he watched with interest as a group discussed the book *When Hitler Stole Pink Rabbit* with Mr. Haines (#8). There were also the children, noted earlier, who after the science fair thought about projects their friends had done.

Beyond piquing one's interest, seeing a friend at work could convince one to invest oneself:

--Victor, a prolific story writer, tells me how he got started, "I just saw other people writing books [in class], and so I thought I'd make a book."

--Margaret, a third grader precocious in verbal communication, shows me a small stack of detailed fiction she has written. Her friend, Thea, who has been working closeby, is quite articulate but seen as having a learning disability. Thea is usually reluctant to show off her own writing. But apparently anxious to keep up with Margaret, she asks to read me some of her own (#33). Mr. Haines feels that she grows from her friendship with Margaret, even when copying her work.

--Freddy tells me he said to himself, "Since everybody's writing stories, I might as well just get into the act and write one myself."

Some of the investment sparked by awareness of others' work was CM. For example, Bonnie was reading *Little Women* because her
sister had a tape of it and because Andrea was reading it. As noted earlier, several pupils independently carried out tasks based on the science fair projects of their classmates.

Peers Hindering Interest, Investment, and CM

Some collaborative activities were characterized by less personal investment than might be optimally expected. The work was carried out with less intensity, or the students divided up the task so as to complete it with the least effort and consequently a minimally educative experience.

—Two boys begin their morning work time with a long chat when they should be writing journal entries. In his friendly tone, Mr. Haines asks, "Gentlemen, how are your journals today? Finished?" The boys indicate in the negative. "Then don’t wait for us to tell you." The boys get right up, but they have succeeded, as they will in the future, at putting off the work without inciting strong consequences. (#3)

—Abdul copies answers from Freddy’s sheet. Asked if that is O.K., they tell me they have each done half. (#100)

—Patrick is copying his timeline for another student to hand in as his own. (#100)

Concern about the actions or perceptions of classmates may tend to diminish personal investment. For instance, as I have noted earlier under Personal Incentives, Freddy claimed that he was enjoying making his book of insect reports ("stories") and pictures, but he quit before it was finished, torn by the realization that his peers were going on to new activities. Because nobody else was doing insects anymore, that work seemed less appropriate to him. Difficulty in finding a comfortable
partner was another hindrance to investment. David, a new entrant into the class in mid-September, was enthusiastic about revising his paper with me as his partner. Unable to decide on someone to edit with him, however, he stopped (#18). Apparently, none of his new acquaintances were available. Whether there is any lasting impact on personal investment from interpersonal hitches such as Freddy's or David's is not known. In another case, any diminution was clearly temporary. Despite being upset with Kenneth in class for not being willing to listen to his story (#41), Victor continued to be an enthusiastic writer, buoyed by intrinsic interest in that task form.

Although the teachers' showed admirable restraint from interrupting cooperation during work time, they generally did not enforce consequences sufficiently to deter inappropriate interactions. A clear disadvantage of freedom of mobility was that pupils were often away from their work and conversing about something unrelated to it. Whether the teachers were meeting with individuals and groups about their work, ensuring that resources were readily available, handing back papers, or managing some other aspect of the class, their intermittent sheepdogging often allowed some of the flock to go astray.

--Mr. Haines assigns half the class to look up and write definitions of wind, current, and tide. He admonishes the students to help each other. The next fifteen minutes are noisy; no one seems to be working diligently or undisturbed, and few appear to complete the assignment. (#9)
--Ted tells me, "Not that Mr. Haines really knew...somebody would blame me or something, like frame me....A lot of kids, like [he names a boy], they'll go around threatening, harassing, and yelling, and cussing."

Classroom noise. Clearly, the noise level during work times was often louder and the movement more disorderly than "learning noise" or "working buzz." The practice of dismissing all pupils from the circle to their work at the same moment tended to produce an immediately high noise level in which off-task talk and actions were camouflaged. The teachers gave the two-finger signal for attention when they judged the noise intolerable, and in exceptional cases Mr. Haines called everyone back to the circle to insist on resuming more quietly. Yet, few pupils claimed to be annoyed by noise. On the year-end questionnaire, "Questions About Class," only 3 of 39 respondents completed the sentence, "Noise bothers me in this room a lot;" 30 answered "a little;" and 6 answered "not at all."

It would be contrary to the assumptions of the research design and methodology to look for some direct effect of noise level on personal investment. It would be necessary to consider how different kinds of sound and movement are perceived in various classroom situations. To begin to understand pupils' particular feelings about noise, the questionnaire posed: "Noise bothers me in this room when..." The most common answers the children gave were typically "...I am working hard" and "...I am doing a test." One boy was critical of people walking around. Patrick wrote a
complaint about people "getting" other people. Dion embodied a
dilemma of work time. He realized that he talked with friends but
was sometimes bothered by the noise himself. Tina, the voracious
reader, only had a problem with noise "when we get punished," from
which it could be inferred that pupils prefer self-determination
to teacher control over noise and movement.

Student perceptions about cooperation. Despite assurances
from the teachers that working cooperatively was the thing to do,
some pupils were uncertain of the teachers' expectations. Judy
felt that teachers expect children to help each other but not to
copy each other's work. Nevertheless, she and her friends did
copy, so that "everybody gets their work done." Although Penny
preferred working with friends, she believed that children were
really expected not to work together on schoolwork. In their
instructions, by and large, the teachers neither mentioned what
kinds of interpersonal difficulties pupils might encounter nor
suggested what kind of remedies could be devised or obtained.

--Mrs. Gregson explains how wind is measured. She demonstrates
how to make an anemometer then distributes instruction sheets
and divides the class into teams of eight to make their own.
Her process instruction is: "You guys as a group are going
to have to decide how to do this." Some children succeed;
some do not. (#32)

Through Community Games leadership training and experience, under
the auspices of the movement teacher, most fifth graders and some
fourth graders learned how to deal productively with uncooperative
participants on the playground. Conceivably some of those skills were applied in the classroom, but I noted no such instances.

**The Classroom and Cooperative Learning Theory**

According to Johnson and Johnson (1985), successful cooperative learning requires several elements. One is that groupings are small enough—up to six members—to allow sufficient face-to-face interactions. A second element is that pupils clearly understand that they are dependent on each other in a positive way: rather than competing or working individually, they are sharing goals, tasks, roles, resources, and/or rewards. Slavin (1984) sees this element as two separate and important structures: (a) in a cooperative task structure, pupils work at the same or dependent portions of a task; and (b) in a cooperative incentive structure, pupils depend on each other to attain an incentive or reward, so that the only way a member can attain the group's goals is if the group succeeds. A third element stated by the Johnsons is the members' use of skills of interpersonal, small-group cooperation. Fourth, the contributions of each individual must be distinguishable through a feedback mechanism, so that all are accountable, that is, unable to conceal the nature of their work.

**Planned cooperative group activities.** For several weeks, the format for studying Antarctica included portions of the daily worktime spent in regular groups of six to eight pupils
representing various major interests in the controversy. Each group had to decide who would do each of the suggested forms of research—encyclopedias, books, newspapers, *National Geographic*, TV, writing letters, and so on. The teachers listed twelve criteria by which a group could receive points for these group activities, but standards were not specified. On some days the groups were informed that behavior points would be given, which could help them make up points lost previously (#45, 48).

During a typical work session (#32) some group members were engaged and appeared to be satisfied; others were unoccupied and seemed rather dissatisfied. In carrying the group forward in its work, some pupils tended to take leadership roles; others were quite disengaged (#48). When a pupil walked over to another group, it might be with a problem complementary to their work or with conversation disrupting it (#52).

—Of the seven members of the Norway group, six are present to meet with Mr. Haines. They have been taking a long time to finish their letter to the Norwegian embassy. He reminds them that the answer to their letter will help them know what to say at the treaty conference. But they have been hung up on who will be the leader and who will do the various subtasks. They have formed sides. Without sounding threatening, Mr. Haines says, "It doesn’t make any difference to me if you don’t write a letter. I don’t see much interest from any of you. We’ve met four times, and we’ll meet again. I may not leave you as a group." (#39)

—Less than a week before the simulated Antarctic Treaty Conference, the United Nations group has serious problems in sharing tasks and roles. At least two members are unclear on the basic matter of what the U.N. is. As I try to help, only the two girls are willing to work at it; the four boys are quite uncooperative. (#50)
Mr. Haines's feedback to the Norway group did not seem controlling, but neither was he giving them clear criteria by which to gauge their actions. Rather than assisting with their content, he had to help them solve problems caused by the complexity of the task's form, particularly the group decision making that the participants were unable to carry through. In the U.N. group, the boys were apparently not very concerned that their weak contribution to the group would affect their reaching any goals of their own. Thus, the incentive structure did not elicit their cooperation. Nor did they seem to be concerned about their accountability as individuals. The teachers felt that the point system made groups conscious of those not contributing and pushed them to find remedies. I noticed little or no such effect.

The complex form appeared to be getting in the way of understanding the task's content. Although there were many aspects of the Antarctica study that drew students' interest, the more complex content ideas were less likely to be understood when attention, time, and energy were devoted to handling the form. Furthermore, the complexity of skills required by a task's form is likely to have discouraged some participation (Blumenfeld et al., 1987). When students do not get involved with content, there seems little likelihood that meaning (action possibilities, self-determination, self-efficacy) can be discovered or CM occur (unless perhaps in the dynamics of the argumentative form).
The simulated conference in which the unit culminated provided opportunities for those who felt confident about their position to briefly state it and defend it before the class. I had at times doubted that a set of sensible arguments could emerge from the erratic work of the rather large, uncohesive Antarctica teams. To my surprise, the pupils who spoke at the conference were energetic, articulate, and quite logical. Nevertheless, among those who spoke out and those who remained silent, Martha's reading about explorers was the only instance I found of further independent activity related to the lengthy Antarctica unit for the rest of the year. It would be hard to deny, however, that new interests (Ted's, for one, noted in Chapter Four) had been created by the unit. Perhaps a culminating activity suggests that it is time to move on to other thoughts for awhile. Perhaps interests from the unit will re-emerge when the controversy is encountered someday on television, on a library shelf, in fantasy, or elsewhere.

Cooperative activity was encouraged during presentations as well as independent work times:

--Half the class is seated on the carpet with pencil, paper, and lapboard, for math with Mr. Haines (#8). The lesson is an introduction to problem solving. He states the purpose of the lesson then asks a few pupils what problem solving means, writing their responses on board. He tells them three requirements for doing problem solving, the significant one being that pupils work with each other. He reasons that (a) working together is more fun, (b) problems make more sense, and (c) you come up with more solutions that way. He avers that he will only intercede if people are talking about
something other than the math. Groups of three and four are formed.

Mr. Haines writes a word problem on the board and says that only one member of a group need copy it. It appears that this direction does not get through to all, as several groups end up with multiple copies. He allows several minutes to work, noting that at this point the process is more important than the answer. He asks individual volunteers what the steps should be, listing them on the board. He asks who agrees and who does not and receives one response. "What process are you going through?" he asks and hands out a sheet listing the appropriate steps. "We'll see if it's the same." Asking pupils to say why each step should be done, he agrees or disagrees with their responses. He adds some further explanation then assigns two more problems. "Work with your group." After a few minutes he gives some feedback to the whole group: "Here's what I've been seeing people doing...."

Shortly, he adds a requirement: "If you're working in a group, you all have to be able to explain what you're doing." Finally, he writes one group's steps on the board and goes through them aloud. (#8)

Mr. Haines made a deliberate effort throughout this math lesson to guide the group in cooperative learning behaviors. Some of the elements posited by Slavin and the Johnsons were present, and some were not. The groups were small enough. Although there may have been children who felt a competitive personal incentive to answer correctly, the teacher did not introduce competition. Partners shared their materials.

Individuals' participation did not necessarily enhance the understanding or the grade of the others in their group. While some pupils consulted a partner for what to do next on the problems, some worked them silently, and others only watched. It was thus possible, there being no prescribed way to communicate uncertainty to one's teacher or colleagues, for a pupil to bypass
an essential example or portion of an example without attempting it or asking about it. Beyond basic manners, such as not arguing or stepping on each other's work, they had little in terms of helpful ways to depend on each other for mutual success. For all to be able to explain what they were doing would have taken considerable discipline at working together.

There was no required response—feedback—that would enable the teacher to discern the contribution of certain members without having to pay close attention to every group. Hence, beyond the normally difficult teaching task of judging from written answers whether there is understanding, Mr. Haines was faced with determining who might not have even made an attempt. Pupils eluded his ken. The results of some groups were not checked, nor were the understandings of some individuals in the groups whose results were checked. Some pupils who put in insufficient effort were neither discovered nor challenged to do more. Contrary to his suggestion that cooperation would help a topic to be more fun, result in more answers, and make more sense, this lesson appeared to give different indications to different students: that cooperating with peers could mean (a) succeeding at a task, (b) watching partners get the idea while you failed to, or (c) evading the task entirely.

Conclusion. The peer interchange and cooperative endeavor that were encouraged in Room 9 enabled the children to utilize
each other as resources, both for assistance and inspiration. Permitted to talk and be mobile during work times, pupils provided suggestions and examples for each other’s work, as well as informal assessments. Giving one another incidental assistance was common, and peer tutoring, though not so common, did occur. Just by sitting together, classmates provided each other welcome company. Seeing each other’s chosen topics and their products, classmates sometimes took advantage of those things as models for their own future work, as the teachers hoped they would.

It seems that the incentive of affiliation connected with the tasks matched the children’s important personal incentive of affiliation and thus contributed significantly to their personal investment. Also, one might speculate that just as some students pick partners who prefer similar modes of expression for their projects, some may pick partners who are similar in personal incentives. Co-workers who both have a strong motive to achieve excellence, for example, may enhance each other’s involvement. Informal feedback from peers tends to be informational, lacking elements of control that may characterize feedback from adults. Building upon each other’s ideas and seeing what others have been able to accomplish increases one’s perceptions of actions that are possible and plausible. Accomplishing cooperative projects and helping one’s mates can contribute to one’s feelings of efficacy.
Freedom of interchange also interfered with personal investment in work. Pupils sometimes exerted diminished effort by dividing tasks between them without sharing what each other had learned. Although most of the children apparently adapted to a level of ambient noise that was often relatively high, pupils talking or moving about nearby often distracted their friends' attention and tempted them to join in. A pupil discontinued his work on a project because he saw others going on to other topics. However, that instance may be "the exception that proves the rule." In most classrooms, children generally begin a topic with the class or their group and discontinue it when they are told it must be complete. Had he not been in a room where intrinsic motivation was so highly valued, the boy might not have had the option to go as far as he did.

The practice of giving pupils tasks to do in formal groups represented a philosophy of cooperative learning but an incomplete implementation of the structures necessary for it to work. The standards for a group's success, its dependence upon its members, and each member's responsibility in helping it meet those standards—in short, the social expectations that have been found to accompany successful group work—were apparently not well understood and/or not important to everyone. So, some members worked hard while others were slack. Group members lacked the techniques for apportioning tasks and resolving conflicts. Consequently, some were unable to carry out functions important to
benefiting from their tasks, and some were distracted from the content, especially when groups were of five, six, and more. When mutual assistance did not materialize, a teacher could not always be there on the spot to provide feedback. In sum, when they collaborated in formal groups, pupils' personal investment in content was often hampered. CM could not reasonably be expected to follow an experience in which one did not attain important understandings about the content or was irritated by the process.

Incentive Environment

Research in intrinsic and extrinsic motivation (Deci & Ryan, 1985) has tended to show that in doing reasonably challenging activities, persons who feel self-determined are more likely than others to want to continue. Deci, Schwartz, Sheinman, and Ryan (1981) compared pupils (grades 4 and 6) of teachers whose answers to a questionnaire suggested they supported student autonomy with pupils of teachers whose answers suggested they were controlling. It was found that as early as two months into the school year, those pupils whose autonomy was apparently supported tended to have a greater preference for challenge, to be more curious, and to be more likely to work for mastery— all characteristics of intrinsically motivated persons. Hence, it would seem reasonable in the present description to include evidence of controlling and of autonomy-supporting actions by the teachers.
In the present study, observations and interviews attempted to capture the ways that conditions or events in the environment implied and students inferred self-determination (autonomy) versus other-determination (subordination, teacher control). To suggest that individual academic tasks were alone generative of CM would be to ignore the importance of the environment in which they were presented and carried out. It was, rather, the entire program of activities and the social relationships flowing through and around them that created a milieu in which CM might flourish. Terms such as "interpersonal context," "teacher orientation" (Deci & Ryan, 1985), "motivational orientation" (Marshall, 1987), "attitude structure," "atmosphere," "context" (Condry, 1978), and probably "climate" and "milieu" have been used by theorists to refer to an overall motivational character of the situation in which children find themselves, in school or at home. I shall use the term "incentive environment." (This term may have been used by another author. If it has, I regret having lost the reference.)

The incentive environment in which a pupil is immersed in school or at home is comprised of the things that affect his/her willingness to participate—to invest. It is comprised of such things as the types of incentives present, which kinds are emphasized, their degree of emphasis relative to tasks themselves, contingencies attached to incentives, purposes proposed or implied, outcomes to expect, teacher demands and expectations, and the ways all these things are communicated. As I conceive it,
incentive environment is not an objective assessment of observable characteristics nor solely a personal, phenomenological view by individual students; it is, rather, a complex of the participants' expectations that result from the mutual shaping of their perceptions and actions, with awareness of other communities (especially school and family) to which they belong.

Room 9 at Southside was a complex incentive environment, abounding with currents that could refresh or erode students' feelings of autonomy. Over the course of the observations, there emerged a number of categories of action from which either control or support for autonomy could be inferred. This main section is organized in accordance with those areas. It begins with a presentation of the teachers' viewpoints about motivation and incentives. It continues with interpretive descriptions of teaching practices and student actions that formed and reflected the incentive environment in this classroom. Although some occurrences and characteristics discussed here relate to more than one aspect of the incentive environment, I have for the most part taken up each only once.

**Teachers' Conceptions of Motivation**

Both teachers were aware that children can be motivated either by their work (i.e., intrinsically), to please teacher and parents (i.e., reflecting a social incentive), by competition (i.e., ego incentive), by little reinforcements or prizes (i.e.,
extrinsic reward), or a combination of these factors. The school's emphasis on peace discouraged competitive, ego-based task structures in academic and in organized physical activities.

Mrs. Gregson preferred intrinsic motivation but as a practical matter was quite willing to accept the other kinds. "My trouble...in this building, is that the positive reinforcements that I would use in an elementary classroom are not used as much here, like stickers. Because they don't want competition." She felt, according to the principles of behavior modification, that if you gradually reduce extrinsic reward, children will eventually do the rewarded task without it. Similarly to Allport's notion of functional autonomy of motives (Kruglanski, 1978), she felt that some of those children will begin to appreciate the task's intrinsic pleasure.

Mr. Haines expressed strong preference for intrinsic motivation. He valued instances of students, in his words, showing a "connection to the work," "getting into" a task, and getting "madly involved." While very favorable toward taking advantage of children's sensitivity to peer approval (i.e., social incentives: affiliation with peers), he was philosophically opposed to taking advantage of their sensitivity to adult approval (i.e., social incentives: affiliation with adults). He felt that teaching children to please their teacher was comparable to training dogs. He was disdainful of the virtues of completion,
punctuality, correctness, and neatness if they are not accompanied by involvement or curiosity, or what Berlyne (1966) called epistemic curiosity.

I almost tend to have a bias against the kids who are motivated to please me. I tend to brush them aside, and I try and stop myself but...I tend to look for the kids that are really into what we’re doing. And if they’re not into it, I’m trying to find ways to get them involved. But some of those kids get so stuck in that rut of "I’m doing the assignment to do the assignment and get it in on time" that there just doesn’t seem to be any spark....I try awful hard to [change it]. I don’t know that I can, because we give so many intrinsic [sic] positive rewards to those kids that are like that. They get good grades--their parents are usually thrilled with what they’re doing--that they think they’re doing exactly what we want them to do.

He cited evidence that children’s enthusiasm for a form of schoolwork can grow from the teacher’s enthusiasm for that form:

A child had come...from an environment that was all basal readers: a trip to the library every month, and that was it....And the child walked in to us....I truly get excited about the books I read. I pick the books I’m going to read to kids because they’re books I enjoy and still read them myself. And [her mother] wrote in this note that I saved--I loved it...how excited her kid was about books now....

Certain ways of increasing personal investment (the term we used in our discussions was "motivation") in students were unacceptable to the teachers, either because they were inappropriate or simply not apt to have the desired effect.

Included were yelling, corporal punishment, publicly humiliating one student to boost another, threatening, and writing negative comments on the report card. Mr. Haines admitted to employing the last two on occasion, in spite of himself. Mrs. Gregson objected to using prizes and to parents using money but only when their
standards are unreasonably high. She also considered deprivation (of recess, for example) to be unacceptable, but both teachers applied it occasionally as a logical consequence for work not completed in due time. Thus, their motivational practices were generally but not entirely consistent with their idealized beliefs.

**Teacher-Pupil Relationships**

An important component of the teaching-learning situation is the complex of social expectations (by teachers, of students; by students, of teachers; and by students, of each other) and how they are nurtured or enforced (Maehr, 1984). One can surmise how teachers and pupils seem to relate to each other emotionally by observing their interactions and by asking them. There is a dual point in attending to the general quality of teacher-pupil relationships. On the one hand, a warm relationship could promote investment in schoolwork by offering students the social personal incentive of affiliation: a teacher’s approval. On the other hand, conflict with a teacher or peer could (a) militate against a child’s sense of autonomy and/or (b) deplete time, energy, and effort that might otherwise be invested in school-related subject matter. The emotional relationships are, of course, intertwined with student perceptions of classroom characteristics such as choices, feedback, and limits. A general description of those relationships in Room 9 is given here.
Mr. Haines was affable and often wore a smile; his voice was strong but generally not loud. Mrs. Gregson had a more business-like manner; her voice was easier to hear in a din but more strident. She tended to show irritation when pupils misbehaved, and she could be drawn into an argument. Mr. Haines generally remained even-tempered, turning away from potential arguments and employing the unemotional broken-record technique (#19). They were not physically demonstrative beyond an occasional clasp on the shoulder or a quick hug. Neither was sarcastic or abusive. Both found occasion to share personal anecdotes, feelings, foibles, and conversation with the children (#19). Mrs. Gregson was particularly inclined to console students who were experiencing difficulties at home. One day she even brought her two primary-age children to class, lightening the atmosphere a bit.

In interviews, parents expressed quite positive opinions of the teachers' relationship with the children. As noted earlier, Clarissa's mother claimed that since having transferred to this school her daughter played the role of school teacher to neighborhood children with more gentleness and sensitivity. Albert's mother considered Mr. Haines, to whom her son was assigned, outstanding in working and communicating with the children. She felt he encouraged her son's involvement in his work. According to Mr. Haines, when Mrs. Gregson left in March to teach elsewhere, some of the girls expressed feelings of deep
hurt. Dion's mother noted that her son talked about his teacher, Mrs. Gregson, a lot. "That was his favorite teacher, and I think he hated for her to leave." The teachers trusted each other's judgment and valued the qualities each other brought to the classroom. Mr. Haines appreciated Mrs. Gregson's background in science and her ability to work with very low readers. He felt she understood well the agendas and needs of parents. Mrs. Gregson particularly valued her colleague's ability to work calmly with difficult boys.

Although there was nearly always a teacher somewhere in the room, it was very large and vision was obstructed. Yet, only once did I witness a child warning colleagues that the teacher was coming (#49). I take this absence to indicate that the students felt less of an adversarial relationship with teachers here than in other classes I have experienced, including some of my own. In interviews, although they had various reservations, none of the children expressed antipathy toward either teacher.

--Toward the end of the year, Mr. Haines and the permanent replacement frequently keep the two halves of the class separate. Frieda laments, "It was like an orphanage... Mr. Haines and Mrs. Gregson, like, owned the orphanage, and one would take the whole class out on a trip or something."

**Choices as to Tasks**

Considering time as a resource earlier in this chapter, I pointed out how children could find various times to pursue CM in the classroom. Discussing peers as resources, I noted that pupils
had considerable freedom of movement and interchange. For students to make their own responsible choices was a major objective of the teachers and was consistent with the philosophy of the school. In an interview, Mr. Haines said, "I want kids to be able to go and make personal choices and to complete them....We attempt to produce independent workers." Referring to the two previous years of the program, Mr. Haines said:

My expectations were as basic as to get the kids to the point where I didn't have to be telling everything they were supposed to do, every minute of the day....To get them to the point where I could say, "Here is a list of things you can do to share your reading book," the book extensions, and they would have the ability to go up, choose something, and go get started on it, without me going through this whole process of, "This is your assignment. It's due next week. This is what you have to do to share your book."

He and Mrs. Gregson both felt that this year pupils were considerably better able to go from task to task on their own. She told me:

If we had received kids who had never been in open space this September, we could not have done the organization we've done. But the majority of kids have been in open space. They've been in informal for two years.

Her goals were similar to those of her colleague. She said, "Students should come out as independent learners that no matter what the subject matter is, they can know where to find the answers...." She wanted children by the end of middle school to have had experiences that enable them "to discover where their strengths are" and to "figure out 'Hey, I really have an interest in art [or music or reading] and that's where I ought to put my
energies.'" She felt that many children need particular help to arrive at these goals:

Some of the kids that are struggling with what we give still don't have the independent skills or reading skills even to do what they'd want to do on a topic. They couldn't go to the encyclopedias and read, or books and read, materials on the topic of their interest. Because they can't read.

While she felt there was much to be gained in an environment in which children had the ability to make many choices, she was anxious about the prospect of diverging from traditional curricular sequences. "You really click reading in the third grade," she said. "You really click a whole lot of math skills taught in the third grade that are introduced and solidified." In discussions with her partner she lobbied for inclusion of more group instruction, to teach those skills more directly (#24), but her argument apparently held little sway. Group and individual lessons for math or reading skills were infrequent.

The teachers respected and encouraged difference among children in their work. For tasks that could evoke self-expression, Mr. Haines spoke of being strongly opposed to setting uniform requirements. He was disturbed by teachers who sought uniformity. He noted that in a district elsewhere in the state, "informal" teachers were criticized for condoning creativity: for sending on to the next grade children who when told to paint a picture of a pumpkin would also paint trees, sky, and something happening in the background. When asked by pupils who were feeling insecure about an art task, he reassured the
class (#1), "I don’t want to tell you what to draw on your placemat. Other than your full name, it’s totally up to you."

The students of Room 9 had many options in regard to their tasks. They often had choices as to what topics to work at, what tasks within that topic, what media to use, in what place, in what order, and with whom. I asked several pupils to talk about being allowed to choose their tasks. Jay felt that there were choices as to what order to do one’s tasks but not what tasks to do. Donita spoke of a consequence of not choosing: "When we have to do a report...for instance...a city in Egypt, he’ll let you pick out which one you want to research up about....He’ll just give you one, if you don’t hurry up and get your own." Posing this question to more children might have provided some useful perspectives.

On the other hand, there were instances when children felt that the teachers gave them interesting choices and supported their going their own way:

--After Kenneth had completed his assigned report about earthquakes, he worked with Gary to make a "book" about earthquakes. Was that assigned? "He asked us to do it....Mr. Haines says, ‘Would anybody like to do an earthquake book?’ and I raised my hand and [so did Gary], and we just went back in a little corner and we just started making an earthquake book."

--Jackie likes to practice drawing in her Luminaries sketch book. "It’s all ours and, y’know, it’s not supposed to be perfect. It’s just to sketch, and we can scribble it out." Is that an assignment--something they’re supposed to do? "Yeah, we’re supposed to do it. But they like us to do it."
--Regarding Freddy's report on praying mantises, was he told to
do it on that topic? "Mr. Haines thought about it, but I
made it up....I told him about it; he said, 'Why not!' so I
just started on it."

It seems that from the content and tone of their teachers'
comments, among other aspects of the incentive environment, these
children perceived they had a choice and indeed a privilege.

Flexibility of Teachers

Although the allowance of choices does not necessarily imply
flexibility on the part of the teachers, in Room 9 they were
indeed willing to alter their stated procedures, standards, and
criteria in response to the needs or progress of individuals.
There was a strong awareness of the individuality of each child.

--Three very capable readers are meeting with Mr. Haines to
discuss a book the three have been assigned. Only one has
finished it. Mr. Haines emphasizes, "I'm not expecting you
all to be done, even though Jackie is." (#8)

Ted would sometimes rock or swing on chairs during circle
time or wander about the room, self-absorbed and touching things
compulsively. The teachers recognized that he was a highly
creative person who could become intense and persistent at
handling a topic, and so they were tolerant of his restless
movements (#15). During their study of the United Nations, Mr.
Haines explained:

I am thrilled that Ted is so into what he's doing right now.
Even though I have a problem with it being World War II that
he's into, I am still thrilled that he is reading books that
are on such a level that he's having trouble reading them,
which I consider something good, he's challenged by what he's
reading, I'm throwing questions at him about the topic, and
he’s giving me answers that are adult, appropriate, and college level history answers to What did Hitler do here? and What did Hitler do there? and What was going on during World War II and stuff like that. And so on his progress report, guaranteed that I will make some comment that I was really happy that he got involved in what was going on with the study of World War II when we were talking about the United Nations.

Without asking directly, it was very difficult to judge at a given moment whether the teachers were refraining from reminding a pupil to attend to a requirement or simply not noticing. They were, nevertheless, the judges as to when it would be appropriate to let a pupil continue an optional or independent task despite unfinished requirements.

--Albert and several of his pals have approval for at least some of the time they are spending observing and researching the praying mantis he found, even though their daily commitments are not all done. (#6, 7)

--Rosa and Sally are in the library writing a report on Aztec glyphs. They tell me their daily assignments are not done, "but Mr. Haines needs the report," and they might finish the daily work at home. (#106)

Mr. Haines showed willingness to change stated criteria or standards after a task was done:

Bonnie tells Mr. Haines she has been trying to find information about tennis shoes but cannot find the date of their invention. He responds, "If you wrote any information about tennis shoes and I can tell it came from a book, it’s acceptable." (#7)

If he became aware of work not carried out according to directions but in good faith, he did not disparage it:

--A substitute teacher’s miscommunication of an assignment about their timelines has resulted in work other than Mr. Haines wanted. He allows the work pupils have done to count as extra credit. Victor is concerned that a map he is making differs from what is expected. Mr. Haines reassures him:
Well aware and concerned that children were frequently required to leave the room for special classes, the teachers were sympathetic and flexible, allowing them to work at options and daily requirements at odd times. Occasionally, though, they pulled back on the reins of choice:

--I walk in one snowy day to find every student sitting at an assigned table and doing a specified list of tasks without options. The teachers tell me the children have come in "high" from the snowfall. (#49)

When time seemed to allow, they tried to match children’s autonomy in choice of tasks to successful completion of previous tasks:

--Mr. Haines says to the circle (#24), "If you had trouble with the last web, Mrs. Gregson and I will be telling you which ones to do each day. Those people who have been working well on their own can just continue without being told each day what to do."

They appeared to carry out this intention inconsistently, however, allowing most people their usual freedom.

In sum, the teachers acted to help pupils not to feel constrained or defeated by the abilities of their peers or by requirements that might be inappropriate. In terms of Decl’s theory the teachers’ flexibility, especially that of Mr. Haines, meant that they worked to mitigate inordinately severe challenges. If, however, they allowed autonomy without providing sufficient direction or incentives, some students might not be able to find an optimally challenging task.
Classroom Management

Social expectations in the classroom include the ways teachers influence pupils to act within desired limits and how teachers respond when limits are transgressed. These ways or methods are usually referred to as management and discipline. The meanings that influence students' personal investment are derived, in part, from the feelings of constraint or autonomy they get as teachers try to maintain beneficial parameters. The following discussion is concerned with characteristics of the classroom management of the teachers of Room 9, although aspects of management are also noted where they are relevant elsewhere in this chapter, such as the section about peer interactions.

The teachers made efforts to encourage students to regulate their own behavior—to act responsibly on their own. They were expected to indicate their presence and lunch requirements each morning by turning their card as they came in. Restrictions upon use of the bathroom pass was minimal.

--Upon returning from a day of absence, Mr. Haines asks the class, "How did it go with the sub yesterday? What went well, and what do we need to work on?" (#37)

--While giving out accordion folders in which to keep their ancient cultures work, Mr. Haines says to the class, "I want you to be responsible for your work and your things." (#93)

Students sometimes grew weary of the daily pow-wow-type circles that might require sitting on the carpet for more than half an hour. Heavy doses of information and instructions seemed
to become more tolerable when interspersed, as they sometimes were, with compliments about people's work. Whether restless students were to receive validation or censure by a teacher's response to their jostling could affect their work attitudes for quite awhile. Some who were compliant upon coming to the circle seemed to become progressively more restless and defiant as negative feedback was given and they had to sit there ever longer (#24). Mr. Haines' warnings tended to be phrased as friendly invitations:

--Joey, sitting on the outskirts of the circle, is distracting others. Mr. Haines says, "Joey, would you come sit next to me?" Joey balks, "There's no room." The rejoinder comes in a firm but patient tone, "We'll make room." (#44)

Mrs. Gregson often relied on pregnant pauses and looks. It was not uncommon to hear, "I'll wait," or more specific desists (Bossert, 1977) several times during the course of a circle (#32). These were probably controlling in that they indicated the teachers' agendas without reference to the students' own (Deci & Ryan, 1985). At various times, both teachers gave some desists that had controlling qualities. Some examples:

"The longer you complain, the longer I resist." (#2)

"I don't remember telling anyone to use the science center." (#2)

"This is a warning. Three and you're gone." (#15)

"I see people that don't want us to get done today." (#32)

"You are reading with your mouth shut. That is what you were told to do." (#38)
"Thomas, sit down with a book to read, like you were told." (#41)

Phrases like "You are to..." or "I expect you to..." seemed less prevalent here than in a conventional classroom. Mr. Haines often stated his expectations in indirect terms: "I would appreciate it if you would...;" "I will remind you to...;" "I would encourage you to...;" "I highly recommend that you...;" and "you’re more than welcome to...." He used these phrases not only when referring to optional tasks but generally to required tasks, as well. The practice was consistent with his feeling that many children look upon direct assignments with less relish than tasks that are more subtly presented. Saying, "I assume that you just forgot to sit down here with the rest of us," might be his way of giving a reminder without making it sound like a strong reprimand. His phrasing and tone were as though spoken to adults. Hence, to this adult observer, his demands seemed rather more like invitations than assignments.

--The level of noise and raucus behavior have remained unusually high today during lunch in the classroom. Rather than barking a command, Mr. Haines asks loudly, "Why am I getting angry about lunch today?" (#100)

His feedback expressed discontent in a way that did not seem controlling.

Phrasing such as Mr. Haines used in making demands of students might tend to be taken as informational in that they seemed to imply choice, minimize pressure, and be non-evaluative, all attributes of informational messages (Deci & Ryan, 1985).
They might, on the other hand, be taken as controlling when (a) they made the purpose of the tasks seem to be the teacher's and not one's own or (b) they failed to convey sympathy for pupils' preference not to do them. Interviews did not attempt to determine how pupils perceived these sorts of statements.

Drawing upon the work of Haim Ginott (1967), a study by Koestner, Ryan, Bernieri, and Holt (1984) demonstrated that setting limits upon children's activities may be more likely to promote intrinsic motivation when stated in a way that acknowledged their feelings or wishes, as opposed to ignoring them. The teachers in Room 9 were inconsistent in this respect. For example, in a message that appeared to be controlling, the girls sitting at a table were told (#7), "In your spiral reading log you should be writing about your assigned book." Their interest in the books they were actually writing about was not acknowledged. In contrast, when some pupils became restless having to sit for a long time at the circle (#1) they were reassured, "It's hard to sit quietly and listen to names, but we'll only be doing it for a few days." Recognizing pupils' feelings, the message seemed to be informational.

Teacher vows to visit consequences on students had differing tones. In some instances, the tone was harsh and the message threatening--statements keying on their personal authority: "Don't waste time. If I see you wasting time, I'll start taking
privileges away" (#12). Or, "This is a warning. Three and you're gone" (#15). It was generally the same several pupils who were spoken to in this way and faced with punishment. Otherwise, consequences were often presented in a tone of good humor (#2): "Only four tables have not been cleaned up 'fantastically.' I'll know who to give the 'horrible jobs' to." Losing a privilege such as the lunchtime break was quite rare. It tended to be couched not as punishment but as a natural consequence of work not completed (#5, 7, 54). The teachers occasionally offered the privilege of an afternoon recess or break for the whole class if all or nearly all students would finish their agenda items satisfactorily (#23, 27, 80). A quid pro quo such as this might well feel controlling to students eager to have an extra break.

When students were relegated to "timeout" at a designated carrel, it seemed to be punishment. That is, although the behavior precipitating the demand might be amply clear to all parties, there was generally none of the explanation that illuminates a logical consequence, such as expressing "understanding," "the reality of the social order," and how to learn from the experience (Dreikurs & Cassel, 1972, p. 64). Sitting there for a few minutes or for more than an hour, sometimes without a task, frequent assignees often held onto their anger. According to Deci and Ryan (1985), to understand and cope with one's misfortunes is self-determined behavior; to retain anger and react out of anger is equivalent to feeling controlled.
One-to-one talks to deal with their problem did not always follow.

Two boys raised this issue of timeout:

--Thomas tells me, "When I'm mad Mr. Haines may just send me to the timeout place, then after about half an hour come talk to me. I like as soon as I get mad and get an attitude they should just sit down and talk to me for about a few minutes and they'll see if I can control my attitude, and if I don't, then send me to timeout."

--Ted tells me, "I think in this school they could make an improvement by not making you having to sit in timeout just for the first thing you do, because that happens a lot, just for the first thing. You should get a warning before you have to do that."

Later, Mr. Haines countered, "I have different levels of tolerance depending on a student's past history."

Tattling was not encouraged and occurred very infrequently. A "win-win" procedure for settling peer disputes was posted on a classroom wall and was read to the class in September, but it was never formally taught and hardly ever practiced by the teachers. Hence, conflicts that might have been cooled smoldered instead. Energy that students might otherwise invest in their work would then be absorbed by the conflicts. Infrequently, someone was banished to the school's discipline room for a major transgression such as fighting. There, children were counseled and given few stimuli other than classroom assignments to read and write. As Dion put it, "You don't get to talk to nobody, and you're alone."

Intrinsic motivation in a task has been found to be adversely affected by threat of punishment when it is directly related to the task (Deci & Porac, 1978). Research cited by Condry (1978) in
which children were forbidden from playing with a toy, demonstrated that as severity of threat increased, so did their incentive to do the forbidden behaviors. However, when the threat is to control a behavior peripheral to a task, it is unclear how the person's perception of the task might be affected. How severe the Room 9 students perceived a threat to be might influence their subsequent investment. Furthermore, there would be different feelings in persons who only witnessed the threats, persons who were threatened but not punished, and those who were actually punished. Hence, it is unclear how or whether the controlling nature of the loss of privileges or confinement to a carrel or the discipline room could be expected to influence pupils' personal investment.

Some people were particularly adept at avoiding work, seemingly able to detect any lack of firmness in the teachers' demands. Joey was skillful at grouching his way out of working, eventually to be given an easier task (#30) or none at all. Persons who were told to leave the circle for overstepping expected decorum were often not held responsible for finding out what they had missed. A child who had been with these teachers the previous year pointed out that some people like to be removed to the timeout seat. The teachers knew that it would be an opportunity to miss work (#2), but no solution was implemented. When I asked Joey, who had been ejected to a carrel, how he would find out what had been going on, he only shrugged (#5). On one
occasion, Mr. Haines picked three irrepressible young men— Sammy, Joey, and Zach—to help him with some chores during work time (#8). It is not clear when they would do their regular work, if at all. The chores were not likely to suggest independent activities in any academic areas. On the other hand, the teacher may have made school seem more meaningful to these boys by appealing to their personal incentives for affiliation and exclusivity.

Overall, except during the weeks when there was a substitute for Mrs. Gregson, the incidence of inappropriate behavior remained fairly stable as the year progressed. Still, the minimal investment of some pupils gave them time to get away with disturbing others. The teachers tended not to intervene during work times unless a student was clearly disruptive or was spending an inordinate amount of time away from sanctioned tasks. The consequences they invoked for transgressions of deportment varied, usually with sensitivity to the demeanor of the child, but inconsistently so. Nevertheless, they devoted much effort to talking with reluctant pupils to help them succeed and not disturb their peers.

There were many occasions when the teachers were legitimately occupied and thus unable to see the quality of work some individuals were doing. Unfortunately, they were sometimes pupils
whose personal investment was rather less evident than others, as in the following instances:

--During the lunch break, Benjy has carefully built a long wall of dominoes and is carefully pulling bottom pieces to see whether it will remain standing. (#9)

--As Thomas is manipulating the hermit crab and its shell, he talks to himself or to whomever is near. He makes several astute observations but does not write any down. (#18)

--Most of the group has been doing a geometry task that allows them to create things from cardboard hexagons. Having built a helmet from his, Patrick walks around proudly showing his friends the helmet he has designed. "It's the best thing I ever made," he says. (#103)

**Summary.** In their classroom management, it was an aim of the teachers to encourage self-regulation. In observing the verbal demands the teachers made upon the students, it was possible to interpret elements of those demands, in the context of this classroom, as being either controlling or autonomy supporting, with likely ramifications for personal investment. When the teachers could take time, their messages responding to behavior probably tended to be informational; when they were brusque, the messages were more often controlling. Pupils left in timeout seats with inadequate explanation before or during their stay tended to hold onto their anger. Realistically, a teacher cannot be expected to be aware of everything pupils are doing. However, one cannot compliment or otherwise encourage continuation of a child's personal investment if one does not notice it. Thus, in a classroom where a variety of activities occur simultaneously,
teachers face a tough challenge to stay alert to significant goings-on.

Whole Language

A number of tasks that were integral to the whole language approach bear some commentary in regard to the meanings children might construct from them.

Reading their own writing. In contrast to classrooms in which pupils are tied to textbooks and meet in homogeneous reading groups to work through the stories and exercises in a sequential basal reading series, there was scarcely an instance of a child publicly struggling to read before the class. What the children did read aloud, one-to-one and sometimes to a group, was their own writing and each other's. Doing so could bring feelings of efficacy, as well as satisfy pupils' personal incentives for recognition, affiliation, task involvement, and excellence.

Newman (1985) notes that growth in language requires taking risks, including sharing observations with others. By encouraging those in the Luminaries group to express their feelings publicly in their poetry, Mr. Haines and the visiting poet were broadening the range of actions these children considered plausible and, thus, meaningful. To alter the meanings the children assign to creating and expressing emotion-laden poetry, the adults' strategy was, in effect, to change slightly the children's perception of
the sociocultural context, so that its elements of rationality and machismo were more equally balanced by emotional sincerity. The few sessions devoted to this aim might be lost on some in the group but a seed might be planted in a few, and a seed previously planted in some might be nourished. In Maehr’s terms, altering the sociocultural context (which is an antecedent to meaning), would modify the perceived action possibilities (i.e., an element of meaning), with the possibility of encouraging personal investment, perhaps CM.

Reading in content areas. Although the research did not gauge the progress pupils made in their reading ability, some children were obviously reading at primary levels. Pupils’ inadequacies in reading became apparent to me as I offered to assist them:

--Timothy tells me the web is boring. I ask why. He says it’s too hard to read. I ask him to read some of it to me. He has difficulty. The next day he tells me his strategy: he will keep going out to the bathroom [and something else I did not follow] but will not do his web. (#3)

--LaRhonda is pleased to have me help her read a Newsweek article about Mike Tyson, the boxing champ whom she likes. Later, she and Estelle read me a short book about a little octopus. Estelle has helped her, and they have recorded the book for younger children to hear. (#12)

--During silent reading time, Thomas has a book on one of the topics the class is studying, but he is frustrated by its difficulty. (#15)

--Freddy is having difficulty finding praying mantis information at a level he can understand. He barks when I suggest he can find some if he’ll check in the library. (#16)
Some pupils did not know how to look for information in a textbook or utilize trade books for reference purposes:

--Isaac, Frieda, and Donita are having trouble negotiating a chapter in the American history and geography textbook (which they have not used before) and finding answers to the end-of-chapter questions. I give them the strategy of reading the questions in advance, so they will know what to look for. I show Norman and another boy the glossary and how to use it. (#62)

--Reports on explorers have been assigned. Abdul asks me to help with a library book about Magellan. It is in the form of a story, not all of which relates very well to the kinds of things most important for them to find out. I try to show him how to scan the book and the table of contents for relevant parts. He seems attentive. He reads me the beginning of a chapter I have chosen as relevant. Then he even suggests we read a section the relevance of which I had not considered. He takes some notes from it.

Abdul misinterprets a segment of the Magellan book, the subtlety of which I have been able to catch only because of my experience at reading. I attempt to explain it to him. (#47)

Investment in books that are beyond one's independent reading level or that require skills not yet learned can hardly be expected. The task of gleaning facts from a book that is in narrative form can be difficult. It has different requirements from a task of using a reference book. The ramifications of each of these types of research task in terms of personal investment and CM are unclear. Perhaps some children are turned on by the life-like flow of narrative stories, while others are turned on by the ability to find clearly stated facts in expected places in books that are primarily expository.
Journals, logs, and reading extensions. The daily journal is a way of engaging children in a lively and meaningful written dialogue with their teachers. Although many entries were brief or repetitive, quite a few children began the year writing with detail, eloquence, strong feeling, or loquacious conversationality. The teachers tried to read and comment in each student’s journal at least twice a week. In one instance, a boy who entered the class at midyear used his journal (which was not available to me) to express problems he was having at home. Mrs. Gregson took his entries very seriously.

But the teachers had trouble finding time to keep up. As the year went on, their checking grew less consistent. Their responses were generally brief and tended to bring little to the conversation beyond requests for detail. By January their checking was quite infrequent and by late winter they found themselves ignoring that activity almost entirely, except for special occasions. The quality of writing declined. If not specifically reminded, a number of pupils would let it slide. Some wrote sparsely, and others managed to almost completely avoid doing them altogether. Several children kept personal journals or diaries at home, but the influence of the school journals on them is not known. By springtime, daily journals were discontinued.

Everyone was given a sheet of suggested questions to answer in their reading log about each book they have read. "Whatever
you’re reading, you should be writing in your log," they were told. This task form was hard to distinguish from a traditional book report. Kenneth told me he put a lot of effort into his log: "I like to read, and I like to talk about what I’ve read....I like writing about what I’ve read, putting it on paper. It’s fun."

Although some pupils wrote coherently about their books, the answers from many were short and unconnected. In some instances, this response may indicate that the book was too difficult for the pupil.

Ted and Tina could not find an intrinsic purpose for answering the questions. Ted’s log listed quite a few books, and he was able to discuss them, but he did not like doing the log. Tina saw the log as something that was required but which did not add to the pleasure of reading. Her father was unaware that she disliked the task: "She never complains about it. It just seems to her a perfectly normal thing to do, I guess. Just part of the deal. Just no problem." But her statement to me was, "I don’t like to write assigned things, really...things [like]: ‘I want you to write about your book.’ I’m like: ‘I want to read my book, not write about it.’"

Her preference for reading over other activities extended to the standing assignment of a "reading extension." That is, after finishing a book, pupils were to choose from a list one way of conveying something about the book. Choices included such things
as writing a letter to the author, charting the sequence of events, and designing a new book cover. Some of her classmates worked intensely and persistently at making dioramas as extensions, which were displayed prominently in the room. Girls, especially, liked to do them, working in pairs or trios. But Tina felt dioramas took too much time. "I’ve made puzzles, drawn pictures of what I think it looks like; I usually don’t make reports on it or anything." She never did extensions about books she had read on her own.

A tenet of the whole language approach is that reading and writing tasks should suit the child’s purposes. It is apparent that to these competent, aggressive readers, the activities offered did not have much meaning. To children whose reading skills were slow to develop or who lacked instruction in techniques of subject matter reading, the reading tasks they faced posed excessive challenge, which detracted from their meaning. Thus, the likelihood of such tasks eliciting personal investment from these students is not great. On the other hand, efficacy and satisfaction of personal incentives were likely to follow from doing creative writing and presenting it to teachers and colleagues who welcomed it.
Teacher-Suggested Reasons for Work

From the teachers and other adults in the building the children heard a diverse mix of purposes and anticipated outcomes stated or alluded to. Some of these rationales for doing one’s work are part of what Maehr (1984; Maehr & Braskamp, 1986) refers to as information, an antecedent to the formation of meaning, which was explained in Chapter Two. It is conceivable that over time, rationales consistently given by adults for students to do their work might attain particularly high (or, in some contexts, particularly low) credibility and impact. Brophy (1983) suggests that teachers can help students appreciate the intrinsic value in their schoolwork by pointing out that value whenever they assign work. Marshall (1987) differentiates between rationales teachers convey in "lesson-framing" statements and "management/maintenance" statements. The actual credibility students ascribed to rationale statements alleging the importance or relevance of material was not investigated here. Nevertheless, some description of how the teachers justified the things they asked of their pupils would enhance the reader’s understanding of the incentive environment.

When introducing a topic of study, Mrs. Gregson and Mr. Haines were generally diligent in giving a rationale in terms of a larger purpose. For example, long before any tasks directly related to Antarctica were assigned, Mrs. Gregson read aloud a newspaper editorial bemoaning the lack of public interest in the current expedition (#5). "The expedition is important because the
treaties end in a year, and there are reasons for caring, and we care. The other side wants to open it up." Later, the study of courts was formally presented as a part of the larger study of rights and responsibilities, which in turn was part of the semester-long study of Antarctica, which had been introduced as fitting into the schoolwide theme of togetherness (for Room 9, how explorers could cross the South Pole together). To pupils for whom social concern is a personal incentive, these rationales could evoke ideas for possible actions.

The teachers usually seemed to take ample time to prepare the class for field trips, speakers, and other special events. This advance organization generally included reasons for their doing the activity. The ballet and art trips were preceded by preparatory visits by speakers. At the ballet, the preparation surely made a difference: the children seemed particularly attentive (#35). The day after their trip to the aquarium, the class met in their circle to recapitulate their experiences (#44). Mr. Haines began by saying, "I’d like to hear what you think were some of the purposes of what we were doing." Thus, more than just a factual review, the discussion was an opportunity to explore the meanings the trip had for individuals. Tina and Thomas commented about ironies in the roles they played in a simulation activity there. Environmentally-minded Kenneth commented, "Water is part of our home, too. We shouldn’t destroy it." The potential for personal investment during field trips and after they were over
may well have been enhanced by time taken to discuss their purposes.

In contrast to introductory rationales that provided information about the usefulness of a pursuit, assignments and reminders about assignments were often couched in first-person terms as requirements, for example: "We'd like to produce an ocean mural on that wall that shows the different habitats (#20);" or "Remember, I want x by tomorrow," or "I need more y on this poster" (#103). By making the teacher's desire the reason for doing the work, the statements may suggest control. Other statements as to purpose seemed to send mixed messages that simultaneously condoned self-determination and asserted control. For instance, in a conversation about the rationale for keeping logs of the books they read (#12), the children were told, "There aren't any right or wrong answers....We just want to know what you're thinking." The first part of the message suggests self-determination; the second part implies that the purpose belongs to the teachers, not the students, thereby suggesting control (Deci & Ryan, 1985).

--In a "sharing" session on Martin Luther King Day, the students are told they should be thinking about how to be peacemakers because they will be asked later. (#59)

--In concluding remarks about the visiting author and her description of her writing process, the class is told, "What she does is very much what we try to get you guys to do." (#62)

--To write about the trip to the aquarium, they are told, "If you have some other creative way of doing it you can ask either of us, and if we like it we'll say yes." (#44)
All of these statements can be interpreted as being both informational and controlling. It is unclear which aspect is the more salient.

Brophy (1983) shows that teachers may justify tasks by saying they will be fun. That was occasionally the case in Room 9. It is interesting that the teachers were several times heard referring to some tasks as work and some as fun. For instance, Mr. Haines announced (#3), "Lots of work to do today, but lots of fun things, too." The former referred mainly to written tasks; the latter pertained to preparing materials, posting papers on walls, and similar activities. The same day, one student told another, "You’re not allowed to take the hamster out. It’s time to work."

On another day, referring to notes pupils would be taking in a science presentation, Mr. Haines said (#9), "These will be collected, by the way. This is real work." Hearing statements such as this, pupils might be tempted to interpret that tasks of which the product is collected represent work—serious, hard, not fun, obligatory, controlled, or scrutinized—and tasks of which the product is not collected are playful, fun, autonomous, self-determined, or not subject to scrutiny. There is not time here to review studies and thought about children’s distinctions between the meaning of work and play (e.g., Fein, 1985). Deci and Ryan (1985) cite studies of intrinsic motivation which have found that persons aware that their work will be scrutinized tend to be
less likely to want to continue later on their own than persons who are not (e.g., Amabile, 1979). Conclusions about the relationship of locus of evaluation (i.e., teacher, self, no evaluation) to CM have been drawn in brief controlled studies (e.g., Gerhart, 1982; Hughes, 1982; Kremer, 1976; Mosley, 1983) and in Kicanas's (1981) 8-week controlled study in a school context. These studies were discussed in Chapter Two.

It would seem that one's personal incentives would play a significant role in determining the kinds of reasons that might influence one's choices. Gary, for example, who was concerned about entering the middle school of his choice, might be influenced by the rationale that task x would help him get in. Observations did not catch any instances in which an individual rationale given by a teacher clearly affected a student's decision to invest in a task, and interviewees were not specifically asked. Additional questions to students and teachers would have been very helpful in examining the role of teacher-suggested reasons.

**Encouraging Personal Investment by Acknowledging Meaning**

**Questioning by students.** Postman and Weingartner (1969) have said that in most classrooms students are held responsible for knowing "somebody else's answers to somebody else's questions" (p. 23). On the other hand, when they are willing and able to pose their own questions that probe a topic, students are capable of leading the conversation in a direction that is meaningful to
themselves. One way that students invest in a topic is, as Maehr has said, by choosing it over others. When students ask questions about a topic, they are choosing to invest time and effort in the asking and in listening to answers. It seems, too, that to get one's questions answered to one's satisfaction can enhance feelings of self-determination.

In Room 9, I was much more likely to hear questions students asked publicly and the teachers' public responses than those in one-to-one transactions. Unlike older students who may tend to probe their teachers for minimum requirements and ways to invest as little as possible in their schoolwork, these third, fourth, and fifth graders generally did not seem to ask procedural questions to undercut their assignments. Rather, their inquiries would anticipate instructions that the teacher was not quite ready to give. Mr. Haines often complimented students for expressing these logical concerns: "Good question!" But most of their questions were content-related. By and large, the teachers answered them obligingly, perhaps suggesting where to find further information. For instance:

--During a presentation about the sea, Kenneth asks, "How deep can the trenches go?" Mrs. Gregson answers, "Later you can look in the purple science book, which has a good diagram. Also, I have a book you can use." (#20)

Questions were particularly encouraged on field trips and when resource persons visited:

--In the visitors' gallery high above the floor of the State House of Representatives, which is not in session, the children have just finished spontaneously grilling their
guide. As they move on, Mr. Haines tells them, "Thank you for all the great questions." (#37)

--The day before the class is to leave for camp, the teachers have written the following entry on the flip chart of the day's schedule: "2:00--Outdoors. Nature. Ecology: What do you know? What can you find out? What questions will we have when we get to camp!?" (#89)

When guest speakers were coming, the class was sometimes assigned to prepare questions to ask them (#30). The teachers did not ask to see or hear the questions in advance, nor did they keep track of who did not ask any. Thus, students appeared to be under no pressure to prepare questions or to ask any. Not all students would have questions to ask, but no none seemed particularly reluctant to ask if something interested them or was unclear. Those who often participated in circle discussions could usually be counted on to have a question for a speaker.

As their study of ancient cultures neared completion, several pupils told me that aside from the questions in their assigned packet, they had their own unanswered questions. Donita was curious as to why people would want to cover up the Sphinx when others had gone to so much trouble to build it and it has meaning to the descendants of those who built it. Frieda wanted to know, "Does the kings or queens ever have a partner?...They don't ever say nothing about missis or mister." She spoke of intrinsic involvement in them, including some fantasizing:

--Frieda: When I answer the questions, and I'm looking them up and getting information on them, I start to think what it would be like if I was at Egypt and I was at history and I lived a long time and still was eleven and came back and I could just tell everybody the
answers. I know it's stupid but (tsk!) that's what I think.

Author: So you imagine that you're there?
Frieda: Yes.
Author: So, sounds like you enjoy doing that.
Frieda: Yes. Very much.

Judy, in contrast, had no questions about ancient civilizations:
"I'm not into it. But since school--our class is doing it--I guess I have to do it." But she wanted to learn about Europe because she had a cousin in Germany whom she hoped to visit. The questions of interest to these girls had emotional content, about aspects of the topic that were meaningful to them. I do not know whether they found opportunities to learn the answers.

The science fair was introduced as a chance to ask questions:
"a chance to do a project at home, having to do with a question that has to do with science," "a chance to ask questions that you have in science," and "testing to see if you can answer a question." Pupils were to choose a topic, a question, or a hypothesis, and design an experiment to answer it (#65). Down the hall, the movement teacher seemed very willing for students to ask questions. Leading a practice session for Community Games leaders, including quite a few from Room 9, she did not introduce new games until she had solicited and responded to comments and questions from the children about their latest playground leadership experiences (#33).

At times, questions from students were not answered and remarks indicative of interest were not followed up. The teachers
seemed to deflect these questions and comments so as not to interrupt their presentations. For example:

--Intent on introducing the anemometer as a wind measuring device, Mrs. Gregson does not deal with Ted’s suggestion that it can be done by holding one’s wetted finger in the air. (#32)

--During a lesson on sea life, Victor raises his hand to tell of a TV show in which crabs were crawling on roads and everywhere. The teacher’s response is, "They’re near the beaches." (#20)

--Mrs. Gregson asks a math group a question, to which the correct answer is "perpendicular." No one answers. She begins to write the word on the board. When she has gotten halfway through it, Joey calls out "perpendl." She does not respond, perhaps because it is a wild guess. On the other hand, he is showing a remarkable ability to pronounce a strange set of letters that has no meaning. (#16)

Jesse’s questions and remarks were often deflected, probably because he was so often disruptive during presentations and work time. He accomplished very little work, yet his utterances were sometimes extremely perceptive. At a museum, for instance, he asked (#65), "Did you guys have this building built?" Defending his group’s pro-development position in the simulated Antarctic Treaty Conference he quipped (#53), "Don’t you guys eat fish?!

But his remarks often seemed calculated to distract the teacher’s attention from the topic to him. He communicated with his peers in a similar way, often using only phrases and mannerisms he had learned from TV shows. His style of personal investment seemed to be to dart into a discussion, draw attention to himself, then dart out. This style required minimal investment and probably gave him feelings of efficacy.
During the sea life presentation, Jesse makes inciteful comments throughout. At one point, he tells about a fish he has. Mrs. Gregson suggests he look up more about it. Her tone, however, implies that her suggestion is a brush-off, more to placate him and discourage his interrupting than to encourage his research. (#20)

Mr. Haines poses the issue of a mayor not doing what the people want. Several students respond. Jesse, without raising his hand, says, "He could be thrown out." Mr. Haines does not comment and moves on. (#24)

Jesse's comments were possible openings to get him involved in a discussion or argument about the subject matter. That the teachers did not take the opportunity reflected the great amount of energy he required of them.

The children were generally not required to read textbooks and answer what Postman and Weingartner (1969) call "somebody else's questions," which are generally found every several pages and at the end of each chapter. I did experience one incident in which a brief assignment of that task form was included in a web. The student struggled with it:

Dion is trying to answer a question at the end of a chapter on government in a social studies textbook and asks me for help. Given his understanding of government, the question does not ask for information he would otherwise seek. So, it does not make sense to him. I try to explain the question by giving him some background, but he is impatient. He is more concerned about completing the task than understanding its content. (#31)

Dion might have been more willing to persevere had the question been meaningful to him.
An occasion when the group needed "somebody else's answers" was this:

---On the way back from their field trip to city hall, the children are writing answers to some general questions on a sheet the teachers prepared. Most pupils are quite involved, trying to do it well. Some of the questions were not adequately addressed by the tourguides, however, so they are impossible to answer now without an adult’s help. Several pupils rely on Mr. Haines and me to give them answers. I am uncomfortable that pupils have had to either do that or guess. (#38)

A serious weakness of their tour was that it was directed toward the history and architecture of the building, with precious little reference to the processes of government that the class was studying. In spite of this fault, students might have redirected it somewhat had they been primed and bursting with questions of their own. Although children invested effort in completing the question sheets, it would seem that a compilation of questions asked prior to the trip by the children themselves might have provided a stronger task-based incentive, with a greater possibility of continuing to pursue questions they could not answer at their destination.

Acknowledging out-of-school activities. During teacher presentations and circle discussions, children sometimes brought up their experiences from outside of school. Their vignettes would often get folded into the discussion, but children were not often asked specifically to share their personal experiences with the class. There were pupils who tended to bring in objects from home to show to the class and tell about them, but the teachers
did not ask for such things very often. They informed the group about certain organized activities in which pupils were taking part. Victor and Bonnie were asked to talk about plays they were rehearsing outside of school (#46). During Boy Scout recruitment week, Mr. Haines let some of the boys speak briefly about their experience in it and noted that there were some Girl Scouts in class, as well (#6). Journals and writing workshop were certainly opportunities to write about one’s daily life, likes, dislikes, possessions, wishes, and so forth (#8). But as noted earlier, the teachers’ written responses were inconsistent and not always empathetic.

When they let students share with the class the organized activities in which they took part, the teachers were giving permission for those activities to become a more prominent part of those students’ identity—their senses of efficacy and self-reliance—at school. Doing so could also alert classmates to action possibilities and make them aware of incentives in the activities, such as task involvement, being with friends, and recognition for accomplishment. On the whole, it seemed that the teachers neither strongly encouraged nor discouraged pupils about making aspects of their out-of-school life become topics for schoolwork.

**Deviation from planned curriculum**. When children brought up current events on the circle, the teachers would facilitate brief discussion if others had questions or comments. The teachers
usually did not inject current events into the curriculum unless they were clearly pertinent to topics being studied at the time or of major proportions, such as the San Francisco earthquake (#30). When that particular event occurred, the children were eager to talk about it. The teachers held a long circle session in which students asked questions about the quake and offered what they knew about it. The teachers answered some of the questions, deferred to children for others, and asked some themselves.

Children brought their own meaning to the event. Andrea said she has relatives in California. LaRhonda told of dishes rattling a her aunt’s house in a previous quake. Many questions reflected concerns about whether aspects of the event could happen to them: How does an earthquake start? What started the fire? Did anyone die in it? How do buildings bend? The pupils’ strong interest in the earthquake resonates to the idea that children are fascinated with extremes, such as the “hoped-for best” and the “unwished-for worst” (Levstik, 1986). On the flip chart, a list of unanswered questions was compiled. Pupils then volunteered (except for a few who were assigned) to find answers to the questions. For much of the day, other work was set aside to do the research. Many reports were written, some of which were presented orally to the class later in the day. One pair of children demonstrated the physics of a quake.

Occasionally, when fortuitous events of a local nature occurred, the teachers pursued possible opportunities for
instructional activities stemming from them. After a boy from another class had a seizure on the playground, several children asked about it on the circle (#7). Mrs. Gregson explained what it was, but neither teacher suggested that anyone find out more about it or related medical topics. I am not aware that anyone did, although I did not ask parents. When a child found a praying mantis, however, the teachers allowed it to take the spotlight, and it led to quite a bit of personal investment.

--Albert finds the mantis outside, and Mrs. Bentley invites him to her classroom to see its picture in a book. Soon afterward, Mr. Haines helps him find an insect book in the classroom. Albert takes it to a table and, with an interested Patrick standing next to him, reads it aloud sporadically as he looks for pages on mantises. He gives up shortly and puts the book away, but they get permission to go to the library.

Albert goes right to a set of books and looks for one with insects. Patrick sits in an easy chair, then gets up and stands near Albert. The library aide asks what they need and before long has helped find a book for each of them. At a small table, they sit opposite each other with books open, the tops of their work spaces touching. Albert reads his and writes. Patrick, who leans toward art, is mainly copying a picture. Albert looks thoughtfully into the distance then watches Patrick draw for a few moments. (Three weeks later, Albert will write in his journal that he is going to finish his "book" about the praying mantis and that he is doing great on it.) A boy comes over and interrupts the pair, first for a social matter, then to talk about each other's work. Albert tells him what he is finding about the mantis. After about half an hour, Albert picks up his paper, snatches up Patrick's, and runs to show Mrs. Bentley. Patrick follows close behind.

Albert takes the mantis home in a jar that evening. Although his mother is uncomfortable with it in the house, she allows him to keep it. This is not the first time he has expanded upon a school activity about insects. She tells me that in second grade his class built an ant colony. Without his asking, she bought him a book about ants, she read it to him, and they discussed it. From it, he learned that the colony
could be constructed from things like milk containers and egg cartons, and he continued the project on his own.

He brings the mantis back to class the next day, and it is placed in a terrarium. That afternoon a grasshopper is put in for food. Albert, Victor, and Ricky are permitted to stand there and observe, hopeful that the mantis will get it. After about ten minutes it strikes, and the boys describe it joyously. Mr. Haines adds to the liveliness of the description and places the terrarium on the floor at the center of the room. About sixteen girls and boys lie on their stomachs, fanned around the terrarium, watching the feast. Many stay for quite awhile. The next morning, Victor and Albert come early with a big plastic coke bottle teeming with grasshoppers for the mantis. A second mantis has been added. When the rest of the class comes in, many go directly to the terrarium.

Soon after the praying mantis episode, Patrick and a friend carried out a variation in the neighborhood, trapping bees in a jar and watching them.

Pupils' roles in planning and problem solving. Persons who emphasize personal relevance in education believe that "schooling...is not likely to provide intellectual experience that becomes internalized unless students participate in the formulation of their goals" (Eisner, 1985, p. 73). Although they seemed genuinely anxious to get good ideas from their students, the teachers made little use of student advice in planning which topics and tasks would be included in the webs or in determining regulative rules governing appropriate behavior. This pattern started to emerge the first day of school, when they stated and justified the rules for being in the circle. On the second day, the class gathered on the circle, ostensibly to collaborate in
developing the general rules and consequences of behavior. A condensed excerpt from that session follows:

--Student #1: Do what the teacher says.
Teacher: Is there another way to put that?
Student #2: Follow directions.
Teacher: That's one I was thinking of that might go with this one. (points to earlier entry on list and adds the new one) How should we handle timeout?
Student #3: Send the person to Mr. Barnett.
Teacher: O.K. (adds it to list)
Student #4: Send notes to mothers.
Teacher: I like that a lot. (adds it to list)
Student #5: Make them lose their jobs.
Teacher: Patrol jobs? Community game leaders? I don't think we'll use community games. Maybe we'll use an afternoon break, something that isn't scheduled that you have to earn. (#2)

Having heard no students press to continue the discussion or ask to reintroduce the issue of rules throughout the year, I surmise that they sensed from the teachers' comments and the context that in reality the essence of the rules and consequences had already been decided and would be similar to those in every class. Rule making seems to have been an instance of control, however unpremeditated and well-intentioned, rather than self-determination.

Mr. Haines occasionally asked students for their opinions about the level of difficulty of task requirements. After a two week stretch in which only three pupils completed their webs (#14), he gathered six pupils around a table to talk about why so few items on their checklist were being completed. He asked for their "comments, suggestions, or complaints" and asked questions such as, "You think seven math pages in two weeks is too much?"
Most of their answers were to the effect that they had too much work to do and it was too difficult, although it seemed quite clear to me that these were capable students who had not been investing in their work. After school, he reasoned to Mrs. Gregson and me that it is necessary to have fewer tasks to complete so that more students could succeed at completing their webs.

Two weeks later, dissatisfied with the quality and amount of work done on the current web, the teachers asked the class to make suggestions for the design of the next web (#22). Suggestions included allowing more time or giving more credit for harder tasks, less time or less credit for easier ones. Andrea, a diligent pupil, said, "Make it five things they have to do and five things they want to do," and suggested consistently requiring two completed tasks per day. In the next web, while the choices of tasks were many, I was aware of no evidence that any of the students' suggestions had been taken.

Finding meaning and refuge in art. Room 9 had its share of less confident readers and low academic achievers. There were also a number of children, particularly a group of boys, who tended to "get in trouble" for contentious and disruptive behavior and avoiding tasks. Among these groups there were children who seemed particularly willing to do artistic tasks, especially when art could be done to enhance or replace reading and writing.
Fifth grader Patrick is a prime example of someone who found art meaningful and seemed to take refuge in it. As noted in Chapter Four, Patrick was physically mature and very concerned about being liked by his peers. He got into fights, and his mother acknowledged having a very difficult time getting him to obey her at home. He scored in the middle range on recent achievement tests but his oral class participation was minimal and the quality of his academic work generally very low. Even when somewhat interested in the topics at hand, he did not work on assignments independently for long before directing his attention to friends.

He was not one to be found reading for pleasure in school. "I like reading but not that much," he told me, trying to sound positive. At home he read about nature from a series his family got through the mail. He also read comics and had preferences among them—Archie, Spiderman, Incredible Hulk. "I kinda like Superman." He said he often did not like sitting and listening to the teachers read stories aloud before lunchtime, because he did not like the stories. He preferred being a lunch helper or helping the custodian at that time. One day he seemed very involved in helping the secretary move boxes into the storage room.

The only times Patrick consistently showed enthusiasm in schoolwork were when the form of representation (Eisner, 1982), or symbol system (Salomon, 1979), was neither words nor numbers but
graphics or three dimensions. In other words, the only task forms he tended to invest in were those which involved the materials of visual art. I gave him the sentence, "When I ____, I wish my teacher would ____." His answer: "When I want to draw, I wish my teacher would let me." He worked with persistence on projects in the art room. He told his mother he would like to be a cartoonist.

---Author: Do you like school?
Patrick: Kinda (heh)....When we do activities I like it but...when we just sit there and do work it gets boring.
Author: What do you mean by activities?
Patrick: We draw and make still lifes and things like that....Or take some clay or something and shape it into something.

He also liked going on the art field trips--"things like roam around and look at other people's art." A museum presents action possibilities, especially to someone who likes to do art.

When the class studied dinosaurs, Patrick checked out a book on how to draw them. As mentioned earlier, after the class made rubber stamps and printed with them, he brought his stamp home and printed some more. He told me that at home he built a "fake snake" out of screws and things, and he would look for objects such as bicycle parts, to try to make something out of them. Early in September, one assigned task was to draw a 12x18 inch picture which would then be laminated to become a placemat for lunch. One of the unifying topics at that particular time was shoes. Three months later, Patrick tuned out a geography lesson, pulled out a fresh white sheet of paper, and drew an elaborate new
placemat featuring his favorite brand of sneaker, "just for fun."
Plainly, art enabled Patrick to connect with schoolwork and had a
great deal to do with his personal investment.

**Note taking: A task form that may hinder meaning making.**

Students, especially the older ones, were expected and reminded to
take notes during some social studies and science presentations by
the teachers and guest speakers. Occasionally their notes were
collected. It was not clear to me that everyone had the ability
to keep pace with a presentation and process the ideas while
taking notes. Although they were sometimes shown what format to
use in writing down their notes for particular presentations
(#45), students were not instructed at any time during the year or
in previous years with these teachers how to determine what to
write and what to omit, when to write and when to look up. Both
teachers acknowledged that there had not been enough modeling of
the process.

Mrs. Gregson told me that the main purposes of having pupils
take notes were to encourage listening and to provide a resource
they could use later in their own work. Several incidents
suggest, however, that the purpose of note taking was not made
entirely clear to students:

---Author: Do you take notes very much?
  Penny: Mmmm, when I have to.
---Author: How do you know when you have to? Does the teacher
  say to do it?
  Penny: If he doesn't say we can't bring paper and pencil.
---Author: Why do people take notes?
  Penny: So you can remember what happens.
Author: They help you remember what happens?
Penny: Uh-huh.
Author: What do you do with your notes after you've taken them?
Penny: Keep them.
Author: Do you look at them after that?
Penny: Mmmm, when we have to.

--Mrs. Gregson suggests that pupils take notes on her presentation. "Do we have to?" someone asks. "You need to have some notes. You need to have some information." Eddie plies his skill of looking busy while actually drawing a picture of something else. (#20)

--While everyone else is sitting on the carpet, Thomas is taking his notes sitting in a chair. Mr. Haines warns him, "This work will not count for you if you are not on the floor." (#9)

--The school nurse is talking to the class about hypothermia. Mr. Haines remarks, "I like the notes I see groups taking." But in taking their notes, some students fail to look up at visual props being shown. (#44)

Blumenfeld et al. (1987) have argued that students' difficulty with a task form often inhibits their ability to learn its content. Note taking can conflict with listening. Without skill in cognitive requirements such as what kinds of things to write down, when, and how, persons diligently trying to take notes may well be inhibited in their ability to follow the discussion, understand the topic, and perhaps develop an interest in it to pursue later on their own. Children who seemed to work hard at taking notes may have been subject to those problems.

Summary. This section has examined several practices in light of how well they seem to have acknowledged the meanings children construct by way of their own experiences and abilities. The class was not often asked to answer the inscrutable questions
posed in textbooks, workbooks, or dittoed worksheets. When a pupil asked a question in class about subject matter or volunteered a comment implying an interest, the teachers responded in various ways, namely to: answer it, compliment it, encourage research into it, ignore it, or deflect it. Opportunities to recommend pursuit of knowledge beyond an initial question or comment were not always recognized or taken by the teachers. Content-related questions or comments posed during the course of a presentation could be ignored or placated, especially if posed by an unruly student. Questioning was particularly encouraged when it pertained to special events. Pupils had some content-related questions that they did not ask or pursue.

Occasionally, when fortuitous events sparked the children's intrinsic interest, the teachers recognized the interest, encouraged children to pursue it, and deviated from their plans. By suggesting tasks and providing material resources, they encouraged personal investment in these and topics related to them. By not dwelling on details of the form of the presentation, the teachers probably avoided interfering with the task-based incentive. Allowing children to work together provided a social incentive.

The teachers publicly acknowledged information about children's special out-of-school activities, as well as objects of interest or curiosity brought from home, but generally did not solicit them. The children were whisked through the motions of
determining their own classroom rules and consequences, but their ideas were not seriously considered. Feelings of self-determination and efficacy could result from rules that give one and one's peers more responsibility, as well as from having had a stake in the process. Having to take notes during teacher presentations, it is likely that children who were unable to keep up were missing some of the information, thereby possibly losing out on future task-based incentives and ideas for action. For some children, especially those who struggled in academic areas, art seemed to provide an efficacious route for dealing with content. In this class there were opportunities to take that route.

Rewards and Other Incentives in the Classroom

In Chapter Two, one's apprehension of the qualities of a situation that may give rise to motivational change was referred to as personal incentive (Maehr & Braskamp, 1986). Four categories of personal incentive were noted: task-based, ego-based, social, and extrinsic. The qualities of a situation that tend to bring about motivation are the incentives themselves. They comprise the same four categories. In Chapter Four, I described many instances of CM in which the main incentive was the task itself. The sections to follow are concerned with the occurrence of the other kinds of incentive in Room 9 and how students interpreted or may have interpreted them. Extrinsic
rewards in the classroom will be discussed first, beginning with grades. Social and ego-based incentives will follow.

Extrinsic Rewards: Grades and Other Feedback

Deci and Ryan (1985) propose that rewards generally acknowledge one of four circumstances. The rewards may be: (1) contingent upon doing a task (i.e., task contingent); (2) contingent upon doing a task to a certain standard (i.e., performance contingent); (3) contingent upon doing a task better than someone else (i.e., competitively contingent); or (4) independent of and without reference to any task (i.e., task noncontingent). From experimental findings, they theorize that from these four circumstances people infer fairly consistent relative levels of control—pressure to perform, think, feel in certain ways. Task-noncontingent and task-contingent rewards tend, respectively, to be the least controlling varieties. Rewards that are performance contingent tend to be more controlling, and competitively contingent rewards exert the most control. In other words, the more a reward seems to be tied to a criterion, the more a person is likely to tacitly justify the task by the reward accompanying it (i.e., to attribute his/her doing the task to the reward rather than to interest in the task. This idea is known as the overjustification hypothesis (Lepper & Greene, 1978b).
Although grades and other forms of feedback are likely to be performance-contingent, it is the student's perception of their meaning in each instance that determines how controlling they are. Deci and Ryan (1985) have said, "Presumably, grades, like other types of rewards and feedback, can be administered either informationally or controllingly, and their impact would depend on how they are interpreted" (p. 250). This section examines how grades and other feedback were administered in Room 9, and it examines, to a lesser degree, how they were interpreted.

Report cards. On the report cards, the traditional grading system based on absolute achievement had been replaced by one meant to reflect the degree of independence with which a pupil was progressing in the major skills and behaviors of each subject area. Report card grades were in four degrees:

I = 'Successful independently;'
T = 'Successful with teacher intervention;'
O = 'Successful one to one;' and
N = 'Success not evident at this time.'

Accomplishments were not additive, or averaged. So, doing more or making fewer errors did not necessarily translate to a higher grade. For example, several pieces of creative writing were expected of each child by the end of each grading period. Each could affect the "written language" grade, but only one was chosen by the student to be, in a teacher's words, "evaluated
extensively" and placed in the student's writing folder as end-of-quarter evidence for parents who came to a conference at those times.

The teachers seemed supportive of the grading system. But Mr. Haines was disturbed that the report card had space for only a single, general indication of whether a student "initiates the pursuit of own interests and activities," rather than a place in each subject area. He tried not to let the constraints of the grading structure interfere with pupils' personal investment:

--Kenneth asks, "What if it takes longer than a quarter to finish something we're writing?" Mr. Haines answers, "If it's too long it's not appropriate for here. You can do it on your own at home." (#8)

Most parents who were asked seemed to find the grade reporting system acceptable. Ann's father, however, was used to a Chinese system and so felt frustrated at not being able to use grades to determine her class rank. According to their descriptions, parents generally talked with their children about report card grades as most parents do, with various degrees of pride, encouragement, urging, reward, and warning.

Discussion and mention of grades and report cards, whether publicly or privately, seemed to occur less frequently among the teachers and pupils in this class than in most. Some students, perhaps many of them, were unclear as to the meanings of the letters. At least one pupil, and probably others, thought of the letters as functionally similar to the traditional ones. The
salience of report cards as incentives to complete one's requirements and do them well varied according to the child and the nearness to the end of the quarter, when the teachers reminded them of their incomplete work. When during the course of each quarter the teachers had determined which specific tasks to include in their consideration of the various report card categories, they generally took time to list them to the class, so that pupils might pay extra attention to those tasks not yet completed (#33). From time to time, the teachers informed the class of criteria they considered important and liable to influence grades. The teachers preferred to call tests "evaluations," because they tended to be ungraded and because the usual term might evoke anxiety. Only about three or four were given all year (excluding standardized achievement tests and diagnostic tests).

Checking and marking papers. In implementing the grading system, the teachers' written feedback on papers was usually in the form of checks, pluses, minuses, and comments; pupils' work was not graded per se. According to Mr. Haines, about two or three papers with written marks or comments were sent home each week, plus major projects at the end of units. This was fewer than a conventional classroom. Without figuring for his colleague, he estimated sending home two to three individual notes to parents per week and speaking at length with about one parent a week. He collected pupils' folders of web work periodically,
particularly near the end of the quarter (#37). The reading logs were checked about every other week. He conferred with a given student about reading, writing, or web work as little as once a week or as often as twice a day, generally more around report card time (#37). He would write few comments on completed work, putting more energy into formative comments, mainly verbal, while work was in progress, because he felt they tend to have little effect at the end. Hence, he checked only a small portion of each finished paper, having a student or a college-student-participant check the rest. He examined math contract work at intervals, in the early morning and in the evening (which is why I did not see him doing it). Social studies papers tended to receive more deliberation than others.

--Donita’s understanding is, "If it’s something really big, he keeps it and put it in his book, for your grade."

--With half the class gathered around, Mr. Haines asks one person at a time which items have been done, then summons each to show him particulars. For some items, he asks about how they were done. "Did you get them all right, or do you need some practice on them?" Here and there, he compliments, "I like how you did these," and makes suggestions, "On that, you might want to...." (#10)

By asking rather than telling, and by his tone, he seemed to be supporting autonomy.

**Conceptions of credit.** The teachers used the terms "credit" and "extra credit." For some tasks they explained the requirements for getting credit. They proposed or approved tasks that would warrant extra credit. In specific instances their
discussion stated or implied what the terms meant, but the class
was not given a firm definition.

--"We want to give Penny credit for reading that book during
silent reading...so keep track on your reading record." (#4)

--"Yes, those who went to the public library and told me will
get extra credit." (#7)

--"If you did something for me on the earthquake today and want
to get credit, leave it here. Or if it’s not very neat, take
it home to work on it." (#30)

Consequently, pupils’ conceptions of the meaning of credit
was based on accumulated experiences here and elsewhere. Their
conceptions of what credit meant ranged from the likelihood of an
"I" on the report card to a reward:

--Albert thinks it means that you get points, and the people
who get the most points "get a pizza party or something like
that." He does not seem to realize a distinction between
credit and "extra credit."

--A fifth grade girl shows me a piece of her artwork. It is
high quality work, and she wonders if she will get extra
credit. I ask her what she means by that. She says it means
making your grade higher for doing something more. I ask
what extra credit would do, since they do not get A’s and B’s
here. She does not know. (#3)

--Freddy speaks of having written an assigned report on some
explorers and then writing an extra portion "so I can get
more credit...more points." He translates credit to mean
getting a better letter on his report card.

--Dion guesses extra credit might be a sticker.

--Kenneth tells me, "You can go home and do a report and,
y’know, without the teachers even knowing about it, and
you’ll get something for it." To him, credit is an addition
to your report card grade for work you have done. Extra
credit is received for doing something the teacher has not
assigned or something assigned but not to the whole class.

--To Clarissa, extra credit means that if scores are given for
something, and you do extra, you get extra points. Her
answer is influenced by an in-progress schoolwide contest in
which "gold" tokens are given to students for each book chapter they read. They enable you to have a better chance to win a prize in a drawing. (Ironically, she later is a contest winner, and is disappointed that the book that is her prize is below her reading level.)

--Does Ted do work for extra credit sometimes? "No. It's just a waste of time if I'm not going to flunk." So if he were in danger of flunking, would he do extra credit? "All the time." What does extra credit mean to him? "Better report on my grade card. And my mom won't get too mad if I flunk, if I have tons of extra credit. It's like doing something and you get more of something that you might need."

Doing work for extra credit could even be a way of avoiding less desirable tasks:

--Wendy and a friend have written a list of definitions pertaining to bones and muscles. Why did she do it? "I was interested, plus I didn't want to go down [sit with everyone] in the circle."

Several pupils intimated to me that although they were aware that they would probably receive "credit" for accomplishing certain tasks, their intrinsic task involvement was still a strong (and perhaps the main) reason. Albert described to me an experiment in which he kept some lettuce in salt water at home. While he seemed to have been vaguely aware that he would get credit for carrying it out, he did it mainly for the fun. Andrea, who had been reluctant do a science fair project that was not required of her, did one for extra credit and became interested along the way. Ted told me (#104) he likes to know that he has done super or excellent on his work, especially a project. The grade tells him that. It is not the extra credit that he wants. For him, grades are informational feedback. (See the section
entitled *Personal Incentives* in Chapter Four for evidence that grades may complement intrinsic interest.)

Oral feedback. The teachers frequently remarked to children on a one-to-one basis about their work. As alluded to in the section about teacher-pupil relationships, the teachers had their own styles of verbal interactions with the children. Teacher comments that I overheard generally seemed encouraging, and those that were corrective focused more on the work than on the child. The data are not sufficient to determine how important the children considered written versus oral feedback, or feedback during work versus after completion. Several children did, however, indicate that one or the other was helping them to know how well they were doing. The general feeling seemed to be that Mr. Haines was in a good "mood" when telling them about the quality of their work. When I asked children, "How do you know if you’ve been doing your work properly?" they cited both oral and written feedback:

Abdul: Just ask Mr. Haines.

Benjy: Mr. Haines says, "Good job, Benjy. Keep working at that...[or] Ooh, Benjy, that’s wrong. You gotta go back and correct that."

Rosa: (unequivocally) If I’m getting it all done, and it looks like it’s right, and if the teacher says, "Good job," or something like that, he knows that I’m doin’ it right....if I ask him to look at it, which I usually do.

Donita: Mr. Haines comes over there most of the time, and if we’re not doing it right, he tells us to do it right...or he tells us to write it over again....But if you have it like he want it, he’ll keep it, and
then the next day or the day after that, you’ll get it back....Sometimes he writes, "You can do better," or "Good job," or something....And you know exactly what you have to do better.

Judy: Mr. Haines will say, "This answer isn’t correct. Maybe you should do it over again."...[Then] sometimes he explains it to us....[I like] when he writes on it....Mrs. Gregson always wrote on our papers..."X" if it’s wrong, "plus" if it’s O.K....Sometimes she writes a sentence that tells you how it’s good, why it’s good....

Frieda: When I get [my paper] back? [The teachers] usually have compliments on the paper, like "You can do better," or "Nice job," or "Needs more work."...If you ask [a teacher] a question and you take the paper up to them, and they look at the rest of the problems that you’ve done, they’ll tell you what’s wrong and what’s right.

Before receiving any feedback, Gary sensed the quality of his work from the amount of time and effort he put in. Frieda, too, depended on her own feelings of whether she was doing her work well. She and others also depended upon peers for feedback, as I have noted in the section above about cooperative learning.

Oral feedback given publicly was a prominent part of the creative writing process, so it has been described in Chapter Four in the section overviewing writing. It has also been touched upon in the overview of the social studies curriculum. Oral, public feedback for pupils’ writing from Mr. Haines and from peers seemed highly informational. Whether positive or negative, it concentrated on elements of the task and not on the person or some contingency.
Their public feedback to individuals usually had a dual purpose. For example:

--In an implied comparison, Mr. Haines announces, "Only one person so far has finished the work—Donita....Everything is in. Her name is on it. It's done well. Give yourself a pat on the back." With the smallest of smiles, she does. Later, I ask how it made her feel. "Happy," she says. (#7)

The announcement was clearly intended to: (1) give her ego-boosting efficacy information; and (2) challenge the rest of the class to meet the norm she had just met. While the first purpose was evidently fulfilled, I do not know whether pupils then became eager to outdo her; more likely, they simply felt that her achievement was evidence that completion was possible.

--As Mr. Haines prepares to begin a social studies presentation, several pupils ready their paper and pencil. "I like how Dion's going to take notes right now," he says.1 (#31)

Although his phrasing of this social incentive contrasts with his stated desire that pupils work for reasons other than to please him, his public compliment was clearly meant not only to encourage Dion but to remind others of the expected norm. It was followed by a flurry of papers as other pupils strove to comply. Whether they were trying to meet Dion's standard or to satisfy the teacher is unclear.

1I have heard elsewhere a teacher disapprovingly call this type of comment an "I-likee". She considered it more appropriate simply to state what the child is doing, without tying the affirmation to teacher approval.
There were other instances in which the dual purpose of ego incentive to an individual and indirect challenge to the class was evident, as when a teacher would say, "I like the way x is sitting quietly and not interrupting." In these messages, however, it would seem that classmates could feel a greater dose of control than information, because the act being complimented was more a matter of obedience than accomplishment. Jesse and others could sometimes be observed responding to such a message by doing exactly the opposite.

Summary. Grades and report cards were certainly not over-emphasized or used as threats by the teachers. The grading system on report card grades did not have quite the ordinal character of numerical grades or traditional letter grades, and pupils' understanding of the meaning of credit was rather nebulous. Thus, grades were perhaps less prone to be compared in a competitive way by students, teachers, and parents. Children generally seemed to take written and oral feedback as informational. Public feedback to individuals about work seemed mainly informational; about behavior, it seemed more controlling. Consistent with interpretations in Chapter Four under personal incentives, investment that was mainly attributable to interest sometimes seemed to be complemented by credit. Because the teachers' written comments on papers were not inspected regularly or frequently in this study, it is not possible to firmly conclude that they tended to be either informational or controlling,
sufficiently frequent or too sparse to be helpful, or to influence personal investment such as CM.

**Other Forms of Extrinsic Reward**

The teachers sometimes distributed popcorn that they had brought or candies or cookies brought by a child. These treats were usually either noncontingent little surprises, or else they were contingent on completion of a task that posed no great challenge, such as doing one’s clean-up job. For pupils who carried out the tasks, the treats were friendly incentives that did not appear to create anxiety. No interviewees seemed to feel the treats were important influences on their work. On a few occasions, a teacher announced an unexpected treat for those who had brought in their homework or homework log on time (#5, 62). Occasionally, to students who had gone beyond the requirements of an assignment, they unexpectedly gave a good-work slip, which if signed by a parent would allow 15 minutes of computer time, anytime with any program. When treats were given unexpectedly, the chance to win them had already passed. Conceivably, pupils who had not complied and received no treat might experience some resentment due to a tacit sense of hindrance to their self-determination.

At one point, Mr. Haines inherited a supply of “energy bars,” which he promised to pupils who would do certain tasks on early life in Ohio. Ted, a bargainer, asked if he could have one if he
would write a report. Mr. Haines, wanting to take advantage of this opportunity to get some careful work from Ted told him, "Yes, if it’s a really good job." Thus the reward became performance-contingent. This variety of reward can be very controlling. However, Ted was already interested in the topic and might well have written a report anyway; so it is likely that the intrinsic incentive was stronger than that of the bar. Furthermore, the reward was his idea first, not the teacher’s.

One use of extrinsic reward was quite novel. After a lawyer had spoken to the class, it was suggested that pupils write something about his talk. About a week later, the class was informed that those who had written about it would be going on a field trip to the courthouse downtown. The trip was an unexpected task-contingent reward. At the last minute, two pupils begged to be included and did cursory write-ups but were denied. It is quite conceivable that if this kind of contingency were repeated later on, student response would be greater. Fourteen pupils—a cross-section of the class—were treated to a highly engaging tour, including a mock trial in which everyone had a role (#36). Most participated with intensity and high quality. I was not aware of any CM relating to the trip for the rest of the year; but from an experience so special, so adult, and so related to what children would see on TV, I would anticipate that CM will eventually follow.
In one instance, the use of a break as a
performance-contingent extrinsic reward created quite an
unpleasant situation. With one of the teachers accompanying half
the class on a field trip, the other teacher offered the remaining
students a special afternoon break following their silent reading
period (#51). The break, a reward shared by everyone, was a
cooperative incentive. But to attain this break, there was a
special requirement: time during which anyone was talking would
not count toward the half hour of silent reading. Everyone was
working separately, which constituted an individual task structure
(Slavin, 1984) with no dependable means to influence each other.
Further, any one person had the capability to bring a negative
consequence upon everyone. When anyone broke the silence, all
were kept from their break, and quiet pupils could only implore
their intransigent colleagues or quietly fume.

Social Incentives and Ego-Based Incentives

The ability to distribute or publish one's work has possible
appeal to several personal incentives such as: the ego incentive
of appearing to do better than one's classmates, the social
incentives of being able to share one's product with others or to
receive approval from a teacher, and the extrinsic reward of
recognition by peers and/or adults. It may bring feelings of
adulthood, excellence, or exclusivity, as well. The children did
not have direct access to the office machines, but they were
generally allowed to get their papers xeroxed and sometimes
laminated. They occasionally used the Print Shop computer program to give a more professional look to their papers.

The incentive for recognition was probably inherent in one of Mr. Haines’ writing workshop presentations (#8), when he said, "Some magazines will publish your writing. It’s not hard to get them to publish it. Millions of kids will read it." It is possible that Penny was expressing a personal incentive for recognition when she told me she wanted to publish one of her stories. Whether or not recognition was important to her, acceptance of one’s work for printing and distribution is likely to add to one’s sense of efficacy.

In explaining the science fair assignment, Mr. Haines emphasized task-based incentives, including two I noted earlier: "a chance to ask questions that you have in science...a chance to do a science project at home." He explained other incentives inherent in the fair (#65). The projects were to be displayed in the gym and judged by adult guests. Displaying and judging would seem to appeal to people’s motives for excellence and recognition. The performance-contingent and perhaps competitively contingent nature of being judged might appeal to some pupils’ competitive motives. When the ribbons were awarded, a number of pupils were upset, thinking they had done better than the judging indicated. A possible explanation for their discontent is that the performance-contingent reward, especially without clear criteria, may have thwarted their sense of self-determination. I did not
try to find out whether their discontent may have hindered their further investment after the fair, but in retrospect I would speculate that it did.

To induce Sammy, a basketball enthusiast who rarely produced any work, to do a particular assignment, Mr. Haines offered to hold a "slam dunk contest" (using paper wads and a trash can). Sammy had a greater competitive motive in sports, where he was successful, than in academics, where he was not. For his classmates who encouraged him to do the assignment, Sammy's reward can be seen as an appeal to their social personal incentive, to enhance their relationship. Sammy did the assignment, the whole class attended, and the more outgoing youngsters took part. It was a shared reward (Johnson & Johnson, 1985), a kind of cooperative incentive structure (Slavin, 1984) for those who enjoyed it.

To increase the number of assignments students completed, the teachers decided in late September to try a wall chart listing the names of the students, the assignments, and a star for every assignment a student had completed (#16, 22). Mrs. Gregson explained her rationale:

"They [the teaching staff here] think a lot of the chart kind of things that you do to motivate kids is too much competition. It's more one-on-one [here], you know: positive notes. And not that those are bad. I like those, too. But I think the other things work. You need to use all of it!...It's like giving the kids one list of things to be done for the week. I think [if] we put their names on the blackboard all next week so we can say, "This is what you owe me by Friday," we're going to get more work done....There is
a definite motivation. [They will] see their name on the blackboard...in front of everybody. That's why I told Ron, "I want to cover this board with charts of what needs to be done."

It is not clear what types of incentive were suggested or motive evoked by the chart. The teachers were not heard to explain it in a way that suggested competition. However, when one of the teachers announced, "We will be taking down some of the stars on the wall chart for the flag activity because they were so messy they'll have to be done over again," (#16) students could have felt the statement as pressure, i.e., controlling. Because they had no part in conceptualizing or designing the chart, they might have had a tacit sense that it was serving the teachers and not themselves, which is a controlling quality. The chart may have appealed to some students' personal incentive for excellence or conformity. How it was perceived would depend on a child's performance, past experience, and personal characteristics. For part of the time it was posted, by earning a certain number of stars, a pupil would win a free choice of activity.

--Norman has been working on one of the tasks listed on the chart and asks me to help. I consent, but he suddenly realizes that he is eligible for a choice and quits. (#22)

The chart idea was dropped, however, after only a few weeks.

Other instances of competitive incentives set up by the teachers were rare and generally casual. "Who is quietest?" was sometimes the criterion for dismissal from the circle (#12, 15). Mr. Haines once compared the two sides of the room as to how rapidly the students responded to the attention signal (#1). Mrs.
Gregson once said with a smile to a group (#6), "Bring in your papers; Mr. Haines' room is making us look bad." The teachers seemed more willing to attach competitive incentives to classroom behavior than to academic tasks.

In an instance of complimentary public verbal feedback that they frequently gave, Mr. Haines announced one morning:

"We are thrilled and may give a hug to everyone. The walkers did an amazing, impressive job of cleaning up yesterday afternoon. Walkers, come up sometime for a hug. I did a work check and everything went well. I hope the busers will do as well." (#6)

His offer could be analyzed in terms of whether the hug was an extrinsic reward or a social incentive, indicative of pleasing a significant other. Because the hug was not a contingency of doing the task but rather an afterthought, it would probably not be controlling to the walkers. An argument could be made that by comparing the busers to the walkers, the message to the busers was controlling, a call to compete. In context, however, it seemed that most of the children would take the offer figuratively—just good-natured encouragement.

In summary, individual extrinsic rewards other than grades did not seem to have much salience, but over the long term the little treats may have symbolized affiliation with the teachers, thus strengthening the social incentive to be faithful to them. Though not always deliberately offered, the social incentive of approval by (i.e., affiliation with) teachers for work well done was often imbedded in events. Social incentives were at times
intermingled with task-based incentives in the same task or event. A minimum of ego-based incentives were offered.

Deeper Roots of CM, Especially at Home

Environments other than the present classroom, particularly the home, can be the site of two "chapters" of a CM "story." First, children's personal experiences and their sociocultural context (Maehr, 1984; Maehr & Braskamp, 1986) at other times and places can influence the meaning of subsequent classroom events. As Tina's father noticed:

If they take up something in school that she has not had home experience in, she is much slower to catch on and go with it....She really flies with things she's already gotten a hold of at home. 

Experiences that influence the meaning of classroom tasks can have occurred anytime from hours to years prior to the classroom activities. For example, some pupils traced their inclination to read or write or do math independently to experiences in previous classrooms. (Certainly, things a pupil experiences after doing a classroom task can serve as a retroactive spark to CM, but they will not be explored here.) 

Second, school tasks can be resumed outside of school. (They can, of course, be resumed in future classrooms, as when Gary continued to write to his pen pal and actually got to meet him.) As a general practice, I did not ask students to recall how long after their school tasks they had resumed them. Nevertheless,
from students' statements in interviews, conversations, daily journals, and activity chronicles or by implication from those statements, I learned that continuations were often begun the same day, soon after that, or whenever the resources—the time, the place, available materials, or persons—seemed to suggest the activity was opportune (e.g., Christmas vacation, the presence of friends, a trip to the public library).

A number of antecedent experiences and continuations outside of school have been described or alluded to throughout Chapters Four and Five. This section is a further discussion of the "roots" of CM—antecedent personal experiences and social context, especially those occurring outside of school. While the most immediate spur to personal investment in a topic or task form is often a classroom activity, the significance of that activity may be that it enables the re-emergence of earlier experiences. I was interested in what might be happening at home that contributed to a child's personal investment.

In parent interviews, besides gathering information about particular schoolwork that children continued, I asked about family activities and attended to clues as to the incentive environments and availability of resources in their homes. Home observations (other than during parent interviews) were not part of the research design; and time did not permit sufficiently lengthy parent interviews or sufficient analysis of those
interviews to yield more than a few confident speculations in these areas.

It is reasonable to assume that the resources available would play important roles in experiences antecedent to personal investment and in continued activities. Spatial resources—places to play, work, and think—are important. Victor, for example, could do his writing in the basement or his room. Albert could go anytime to the playground a few steps from his apartment.

**Time available at home.** The amount of stimulation that will energize effectance-oriented behavior differs with pressures of competing interests, demands, and bodily needs (White, 1959; 1960). In Bandura's (1981) words, "Effectance promotes 'spare-time behavior'" (p. 227). At a moment when one's interest is not being held by anything, an event or opportunity that might not otherwise be arousing may become attractive, and vice versa. Thus, the choices children make as to where and how to invest themselves depend a great deal upon what happens to be going on around them and what appears to be available to them. Many students, when asked why they resumed topics or tasks on their own, told me they were "bored" or had "nothin' else to do." Those terms indicated a wide variety of situations, however, and experiences unique to each child. Several instance are noted here, with emphasis added. Penny, for example, realized she had plenty of things she could do:
--Penny: I enjoy writing poems. I do it when I'm pretty bored. And when I'm real bored I write about seven-page-long stories.

Author: Do you ever do that in school?

Penny: No, unless I have to.

Author: What makes you bored?

Penny: Well, I don't have anything to do. Well, I have lots of stuff to do, but I already played with all that stuff. And I can't go over to anybody's house or nothin'.

--Tina tells me, "My parents are always reading and I can't find anything to do except [I'll think], 'Maybe they enjoy the books, so [I'll read, too].'...I usually have friends over, and I sometimes help my mom cook, and sometimes I'm working on things...Yesterday you might not have seen me, but I was wearing a poodle skirt, and I made that. That's one of the things I work on. I sew....My mom taught me."

--Author: Where did you get the idea to make a jigsaw puzzle?

Patrick: I dunno. When I don't have nothin' to do I just--think up something.

Author: Who decided you would catch bees?

Patrick: Me and my friend Floyd, we just wanted to do something because we play Nintendo most of the time, but we have the same old games. And we play them over and over, so we just went out somewhere.

When children have the resource of time, they may find opportunities, each in his/her own way, to continue school-related activities. When children said there was "nothin' else to do," they meant that time was available but the activities that normally engaged them were not, or they were no longer attractive.

Material resources. Several parents told me about having bought books for their children. In two homes that clearly reflected low socioeconomic status, parents referred to their child's use of factual reading matter there. Freddy's mother said he likes to read their encyclopedia. Patrick's mother told me he uses the Time-Life nature books she bought her children. Noting
that in China children her age must work until 11 P.M., Ann's parents told me they ask her teachers to suggest books for her summer reading at home. They also mentioned buying her a dictionary. Caroline's mother bought flash cards that she had asked for. Caroline, Wendy, Victor, and Dallas all had access to a computer at home. Caroline and Victor did word processing; Wendy used instructional games; from a book, Dallas copied the codes to create programs. Tina's father buys her books. He has cut out news articles and bought magazines containing topics related to what she has spoken about from school, and he shows her "found objects" relating to those topics.

From students' time logs, Noss (1979) noted that "an inordinate amount of the students' time is spent watching TV" and surmised that "a voluntary continuation of academic pursuits which was not suggested by the school would be highly unlikely" (p. 102). I do not disagree that for many children the first part of her statement is true, and from my interview data I might extend it to include the Nintendo video game system. But I have proceeded with the premise that TV can provide vicarious experiences which result in CM and that a child's selection of programs can be a manifestation of CM. Kenneth, for example, watched the news regularly with his parents. Other children watched documentaries and nature specials from time to time. In Chapter Four, I noted that a story Penny wrote on her own was adapted from a TV show.
In different homes, children approached TV in different ways. Tina’s father encouraged conversations arising from discrepancies between things she saw on TV and had learned about in school. Dallas told me that when he watches TV he may not really be paying attention but thinking of things, such as what he would do in the position of the characters. Albert’s mother said that if you ask him what he is watching he might be "in a different world" and tell you "I’m thinking." Thomas finds that the soft light of the TV gives him a comfortable atmosphere for drawing, which he prefers to the bright light of the classroom.

Clarissa interpreted a museum experience in terms of something she had seen on TV. A crystalline mineral reminded her of a ball of aluminum foil that a TV character had been gathering. Bringing up an instance in which it is likely that CM was related to TV, Patrick’s mother suggested that his interest in the sex education studies in school may have been encouraged by TV programs he had previously seen. "I had HBO for awhile," she said, "and it was like every day I caught him watching movies up there, and some of them were on the up-and-up! Maybe that’s why he’s into the sex education thing real good. I don’t know."

Parental roles and incentive environment. Condry (1978) writes that in a home characterized by intrinsic motivation, one is likely to find neither the absence of reward and punishment nor a sense of "contracting" for them, but rather the giving of unanticipated rewards after the fact. Presumably he would include
not only extrinsic rewards but social incentives, as well. Parents generally portrayed to me reasoned approaches to getting their children to do home tasks (chores, etc.), bolstered with various degrees of pay, privilege, threat of punishment, or reminders of distant consequences. Report cards were treated in various ways. Kenneth's parents, for instance, tried to make a "semi big deal" about the positive aspects of his. Freddy's grades would determine whether he could join a football team.

A child's freedom to go out, to do, to explore, and so forth differs in each family. Of course, the same is true of the parent-child relationships. For instance, while Ann's parents encouraged her to stay and take part in their interview, Freddy's mother snapped at him, "Git out the house!" There is surely much to be said about freedom and about parental warmth and reasoning as they relate to personal investment that cannot be covered here.

In addition to providing resources for their children, parents are themselves resources, giving inspiration and assistance. Of course, they are teachers, as well. In interviews, some told of discussing meaningful topics with their children, and some spoke of their strategies to better ensure success in school and in life. Even before Tina entered school, her father would have her read aloud to him while sitting in his lap. He would help her read and interpret. Both parents taught her "tricks" such as to read books by the same author and to use
the Latin and Greek roots of words to determine their meaning. With her mother, she discusses the books she reads.

Albert’s mother read him stories when he was in kindergarten and first grade and took him to the library. Kenneth’s parents continue to go to the library with him, and they welcome his talking about school topics. After discussing Armenia with his father, and the topic came up at school, one reason he chose to do a report on it was to find out if his father was correct. Clarissa’s mother took her to science fairs at other schools to see how it was done. They had already gone to the courthouse. "You have to take your children and show them things that are better," she said. They talked about many things: the board of education, religion, politics. Ann’s parents taught her math operations and fractions at home before she encountered them at school. According to Mr. Haines, when the class was studying the U.N., Ted’s father noticed a book about World War II. His father handed Ted the book and said, "Here. Why don’t you look at this. There might be something about the U.N. in here." The book sparked Ted’s intense foray into the war.

For Caroline, the information she received during the week of sex education was nothing new. "I been talking to her for a long time....Especially about women stuff." On the other hand, Albert’s mother said she was embarrassed when he came home one day that same week and asked her explicit questions. How well she handled the situation is not known.
One parental function that seems important is to give informational feedback. It may be positive, as when Penny, Freddy, and Victor received compliments from their mothers for papers they had written. Although Thomas's friends like his drawings, they do not see them in the same way his parents do, he said. His father compliments him highly on his art work and encourages him to stay in school to get an education so he can be one of the best artists possible. Informational feedback may also be negative, as when Kenneth received his parents' criticism and instruction—gladly, he said—regarding a poorly constructed dialogue he had written. As in the classroom, however, feedback may carry mixed messages in regard to self-determination. For instance, according to Penny, her parents said, "You're a real poet," but told her she was not old enough to publish.

Parents and siblings serve as role models. Tina's parents would read in the same room as she. The field trips to the ballet reminded Wendy of when she had watched her mother dance and gave Wendy the idea to practice at it herself. Freddy considered his brother "the best drawer, I think, in the whole world." He also enjoyed accompanying his father to work. The art works of several of the parents were on display at a gallery the class visited.

Much as they may aspire to the roles their parents fill, children may adopt values held by their parents. Ann's parents asserted to me, in front of her, that she would emulate their paperwork and study habits and that she was impatient to learn
more. They strongly valued high achievement and appeared to be succeeding at strengthening it as a personal incentive in their daughter. Kenneth valued his parents' advice and their help in revising and editing his papers. He also shared their vegetarianism and environmentalism, as was detailed in Chapter Four. Tina said, "Both my parents love to read, and [it] just got passed on."

Parents send their children to a variety of lessons. Freddy looked forward to tap dancing each week. Victor and Bonnie, as mentioned earlier, took part in drama productions. Ann was taking ballet lessons and as a young child in her native country had studied gymnastics. When she saw the Danish gymnasts at school, she tried once again to do a flip at home.

When parents travel with their children, the places they pass can be used resourcefully. On Sunday drives in the city, Patrick's mother would point out landmarks, so that he could know where he was the next time or if he were abducted. When Tina rode with her father, he would point out things to start conversations. "Anything," he said. "Music, art, colors...." He incorporated his experience as a carpenter: "If we see a house that's burned down, we talk about that. How you'd fix it, whether you could fix it."

Combination of resources. Freddy, a third grader, was outwardly childish in class: small and jumpy--impish. He did not
usually contribute much during lessons and discussions. I learned in our interviews that his one-to-one conversation posed quite a contrast. He was less impulsive, more thoughtful: "Hmm, hard question." Mrs. Gregson agreed that he could be articulate and intense, seemingly beyond his age and stature. His responses conveyed high self-regard and a philosophical tone, which would seem to come from significant adults in his life. For example, he casually recited an aphorism that guides him: "If you think that you’re better than everybody, you won’t have problems." He told me he liked to ride his bike, but more significantly, he liked to "do nice things to people when they’re sad, and down." Indeed, his mother told me that on Friday nights and Sundays on the way to church she would start serious conversations with him. "What are we going to talk about today?" he would say.

Freddy did not readily locate the origins of his thoughts and actions in single events. Rather, he seemed to sense the presence of several influences. Thoughts of his experience in classroom peace discussions melded with programs and advertisements he had seen on TV, things his mother had said, and memories of his second grade teacher. He spoke wistfully:

I think about, y’know, in...like...like I saw this commercial where...where, um...where they send money to Africa to help the children. And then, my mother sent some money there, and then...they don’t have enough money to send to Africa. So all that food is just sitting there, getting stale.

I asked what it was about the peace discussions that gave him the idea. He spoke of closing his eyes there and imagining two
pictures--one of himself lying in the grass, imagining a peaceful future, and one of African "children walking around real slow, with nothing on their bodies and newborn babies dying...."

He expressed great affection for his second grade teacher. "She was ni-l-ice and she taught me everything." He named some things about Africa he had learned in her class and the African countries she herself had visited. His tone seemed to carry a respect for her first-hand knowledge of things so remote. His mother confirmed that he had talked about Africa last year. There was a multi-church organization to which she donated that sent aid to Africa. Every Sunday she and her children would donate, she said. Freddy would like to be able to do something about peace in Africa when he grows up, she said. Freddy's strong desire to do something about the poor people of Africa would seem to hold significant potential for his future personal investment.

For some children, school, home, and church seemed to provide a triad of resources that fostered personal investment. Certainly, Freddy's concern about Africans resulted from a church priority and his mother's valuing, with further information from TV programs and an opportunity to ponder the situation in a classroom activity. At church he was taking keyboard and trumpet lessons, as well. Jackie's interest in art developed through experiences within the same triad. She recalled working with play dough in kindergarten and real dough when her mother was making a pie. Jackie told me she would like to work with pottery, items of
which had impressed her when she saw them in a Mormon context.
Clarissa performed on her violin at assemblies in school, at home
for children in the neighborhood, and at church on talent night.

**Negative home influences.** The teachers appreciated parents
who helped with class activities, attended conferences, and
supported their children's intellectual and emotional development.
At the same time, the teachers felt obliged to stay alert to what
was happening in the home lives of the children. On several
occasions during the year they attended to crises arising in
children's homes. As an everyday matter, however, Mr. Haines felt
that many students' attitudes are negatively influenced by parents
who do not understand or agree with the approach to curriculum and
instruction in this class:

Most adults appear to...want an exact copy of what they
experienced in a school, for their children. They want it to
match, so they know what's going on....except for that small
minority of parents who tend to be more involved in what's
going on, and who read and are interested in what's going on
and take the chance to explore what we're doing....

Did he feel, then, that he was often working against parents?
"No not most of the time, but a lot." Mrs. Gregson had similar
sentiments:

Sometimes it's attitudes that are taught at home and that we
don't have any control of. They've been brought up that
school's not important...the parents don't act like it's
important, and therefore the kid gets the attitude it's not
important. And then you have to work on the parents.

She added another difficulty that may emanate from the home:

It's almost like let's *stop* doing academics and just work on
self-esteem, because they're never going to get academics,
they're never gonna have positive experience until they have
good self-esteem....sometimes it's just that the kid needs to talk about what's going on at home.

As noted by the teachers, there were examples of parental actions and home environments that would be unlikely to enhance children's personal investment in schoolwork. Mr. Haines told me that Gary's mother often made excuses for work that he did not complete. Sammy often came to school grumpy and tired. "Inevitably, if Sammy is having a rough day it's because something happened at night," Mr. Haines said. He related how after many attempts to contact the boy's mother, she finally agreed to come in and observe. "And Sammy sat there that day waiting for her to show up, and she never came in. And from that moment on it was real obvious why Sammy is like he is."

While Dion's mother spoke of the importance of complimenting his good work, she was aware of little that he was doing in school or what his interests were, other than playing Nintendo games. Their home appeared to have few material resources. Consequently, action possibilities relating to schoolwork would not seem to arise readily from his home life. He seemed to be stimulated more at the recreation center and a special after-school program at a local social service organization. In this same vein, Jay said to me, "It was just boring at home. I always get bored when I go home."

Summary. A child's previous experiences at school and at home are important in forming the roots of personal investment in
schoolwork. From interviews with students and parents, it was clear that a number of the parents provided experiences and an environment that did so and could fan sparks of CM. Parents provided books and other material resources at home, important among which is the TV. They provided access to resources outside the home, such as instructional lessons, church, and the library. They made local travel more worthwhile through conversation about it. Parents encouraged reading and engaged in discussion about things such as school topics and current events. Children counted on parents for feedback about their work. Parents prepared their children for school experiences by introducing topics or strategies in advance. As role models for their offspring, parents demonstrated their own skills and interests, including reading. Their values influenced those of their children.

There are parents who do not, for whatever reason, provide sufficient resources or an atmosphere conducive to their children's personal investment. In contrast, when parents listen to their children, converse with them, and validate their interests as did some of the parents interviewed, it would seem that they enable the children to construct the possibilities for acting upon those interests.
Chapter Summary and Conclusions

Access to resources of time, materials, space, and persons in the teaching-learning situation and at home seemed important to the creation of opportunities for children to invest in their work. Peers were important resources, although investment in valuable activities would have been enhanced had pupils received more guidance in how to carry on their relationships.

The character of the incentive environment is very much a function of the mix of incidents that tend to be sensed as controlling or self-determined. In Room 9, the warmth of teachers toward students and the generally respectful tone of verbal communication from teachers and principal toward them were non-controlling currents. Management techniques, although sometimes felt as arbitrary when the teachers were under pressure of time, seemed otherwise informational and based on logical consequences. Pupils often interpreted teachers' remarks and suggestions as encouragement or invitations rather than obligatory assignments. The teachers' willingness to modify assigned tasks and accept variation suggests that to them it was not so important that students fulfill their requirements as that tasks make sense in the context of other tasks and each pupil's individual circumstances. While there appears to be no evidence that rationales given by teachers influenced investment in school tasks, talking about the reasons for their work seemed to
contribute to the classroom’s focus on content rather on compliant behavior as in some classrooms.

By proposing divergent tasks, the teachers often enabled students to construct answers that were uniquely their own. By their sparing use of textbooks, they avoided a source of questions that were not the children’s own. However, while pupils were at times solicited for questions and ideas for tasks meaningful to them, the source of most questions and task ideas appeared to be the teachers. Pupils were not asked to play an important role in planning class activities. While incorporating events into the curriculum that were of general interest, opportunities to suggest tasks based on aspects of individuals’ lives outside of school were often overlooked. With some exception, reading and writing activities were carried out consistently with the ideals of the whole language approach, which is said to build upon intrinsic motivation (Goodman, 1986). At home and retrospectively from earlier grades, experiences such as receiving attention for their work and doing interesting things, especially in language, contributed to children’s CM.

Without assessing the degree of information or control every child inferred from his/her many experiences and the relative salience of each experience, it was still possible to judge that on the whole, Room 9 was not a coercive or stifling environment: that pupils felt substantial autonomy; that grades were not used as weapons, or rewards as bargaining chips; that teachers were
generally seen as supportive and approachable, not feared or despised. I would conclude that their approachability, particularly the friendly personality of Mr. Haines, tended to promote students' social personal incentive to invest. They generally perceived that they had options and that teachers supported their choices. When pupils felt no enthusiasm for the content they were to work on, the ability to do something artistic with it or work together with friends seemed to make it tolerable. The teachers made a genuine long-term effort to make schoolwork interesting and demonstrate its purposes. On balance, the resources and the incentive environment probably contributed a good deal more to promoting than to hindering personal investment.
CHAPTER VI

CONCLUSIONS AND SUGGESTIONS

Starting from a set of value claims which include that school is often boring when it could be made interesting and personally relevant to children, I have sought to learn why pupils resume schoolwork on their own. To do so, I have pursued Maehr's Theory of Personal Investment, incorporating Deci's concept of intrinsic motivation. Maehr proposes that continuing motivation and other personal investment occur when children find meaning in a task through its incentives, its contribution to their sense of self, and their perceptions of action possibilities based upon the task. Sense of self is explained by Deci's concept that intrinsic motivation occurs when an optimally challenging event enhances one's sense of efficacy and provides information, allowing one to feel self-determined rather than controlled.

Because the body of previous studies in CM was lacking in context, breadth, and the spirit of self-determination embodied in Maehr's definition, I have conducted a year-long, naturalistic study in a class of elementary school children. What I have observed and been told there has enabled me to elaborate the
construct of CM, with the aim that practitioners might become more aware of the phenomenon and better able to nurture it.

The particular school, classroom, pupils, and teachers formed a teaching-learning situation unique in its social expectations, tasks, and available resources but with elements common to many other learning environments. By use of thick description, I have provided a means for readers to determine which aspects of the environment are analogous to their own experience, so that they might be confident in emulating or refraining from practices that occurred there. Throughout Chapters Four and Five I have interpreted and described the behavior of the students in school and sometimes at home; juxtaposed that behavior with their statements about themselves and their situations; speculated as to their sensibilities, understandings, intentions, and emotions; and pointed out how their actions seem to illustrate and extend the concepts set forth by Maehr (and Braskamp) and by Deci (and Ryan).

Conclusions

In seeking out CM, I considered other forms of personal investment to be indicators of its likelihood. However, except when continuation was specifically suggested by teachers, the phenomenon in progress was difficult to find. Student and parent interviews were more fruitful, locating many instances of CM retrospectively. The proportion of documented instances that
occurred only in school was quite small, on the order of 10%. About half or somewhat more than half of the documented instances apparently took place only at home; the rest, about one-third or somewhat more, occurred at home and school. These proportions are in large part a function of the methodology and sampling. Hence, the numbers are not so informative as the pattern of where resumptions happened in each subject area. There was a significant incidence of CM in reading, writing, and art in the classroom, some of which dealt with topics in science or social studies; but the large majority of instances of CM occurred outside of school, especially in the latter two areas and in math. Children emulated the school's interactional structures at home, presumably showing by their patient or authoritarian manner what kinds of messages were making impressions upon them.

Circumstances and Character of CM

Interval from task to resumption: An incomplete notion. Pupils acted upon their CM whenever time, location, persons, or materials suggested or opened an opportunity. There were instances of resumption occurring anytime from the same day to months later. Origins of students' interest or experience in a resumed task could sometimes be traced to previous classrooms or to things they had done at home or seen on TV, illustrating Maehr's contention that past personal experiences are important to children's construction of meaning. Thus, the interval between
school task and resumption is not meaningful data unless there is also reference to the child’s earlier, uncontrolled exposure to some aspect of the task’s content or form. When a researcher simply counts how many children resume a task within a specified period, relevant information about the roots of their interest is ignored. There were parents who promoted CM and other personal investment by their sons and daughters from an early age by providing material resources, acknowledging the products of their work, conversing with them about school and whatever else might be interesting, and teaching them strategies for approaching their schoolwork. When parents validate their children’s interests as they did, they are likely to increase the variety of action possibilities the children consider.

The form of resumption. Except in such instances as children practicing math on their own or re-reading a book that was once assigned, resumptions differed widely from initial tasks. Experiences in the classroom and also on field trips were followed by continuations such as reading, creative writing, art work, conversation, questioning, selective TV watching, fantasy play, and creative application to real life situations. Considering this pattern, I infer that whether a given topic (task content) sparks continued investment seems to depend not only on a child’s interest in it but also on the task forms that (a) the child feels competent to do and (b) are welcomed in the environment. That is to say, the forms of expression that a child perceives to be
available influence the possibility and plausibility of his/her acting upon a topic.

**Opportunity for resumption.** In addition, a student's perception that a topic, task form, or both can be pursued seems to be influenced by the perception of opportunity. To Maehr's concept of teaching-learning situation, which includes task design and social expectations, I have proposed the addition of a third component: access to resources—time, space, persons, and materials. In terms of time, resumptions at school occurred mainly during appropriate work periods but also during interstices between organized activities, as well as when other work was expected to be done. Spatial resources that seemed to present opportunities included a variety of workplaces in the classroom and library, freedom of movement among them, and adequate area for using and storing one's materials. Lengthy involvement in topical themes seemed to be complemented and made special by reconfiguring furniture, lines of sight, and decor to reflect each new theme.

Opportunities could be indicated by accessible material resources for reading, writing (including computers), artistic expression, construction, manipulative math, maps, and science apparatus. Adults were sources of information and inspiration, or modeling, of real-world roles and skills. Opportunities are perishable. When a resource is unavailable or is removed, a task
may lose its immediacy to a child. That is, the interest it might have evoked or had formerly evoked can be lost.

**Resources at home.** When CM occurred at home, resources also played a major role. Material resources included books and TV. The spatial resources in the home were supplemented by access to the library, church, instructional lessons, local travel, and other places outside the home. Parents were themselves crucial resources, serving as role models and demonstrating skills and interests, including current events and reading, and joining their children in discussion.

**Peer roles in personal investment.** Peer collaboration is not a necessary condition for CM but can bolster personal investment. The teachers encouraged children to cooperate but did not train them in how to do it, with the result that helping each other was interpreted by students in various ways, sometimes enhancing personal investment and sometimes detracting from it. The freedom of movement and interchange contributed to a convivial atmosphere in which pupils who worked well together shared enthusiasm about their work. On the other hand, the freedom engendered and sometimes camouflaged off-task frivolity and disputes. Formal cooperative group tasks tended to result in unequal participation and conflict that pupils did not know how to resolve, but children invested themselves in these tasks nevertheless. Just observing interesting things their peers had done, rather than actually
working together, was sometimes sufficient to give rise to children's personal investment.

**Personal incentives.** Personal incentives, or motives, are not identical from child to child. Children's personal incentives seem to overlap or intertwine to influence their choices differently in different circumstances. I have elaborated upon Maehr's typology of personal incentives by pointing out that: (a) task-based motives can be characterized by fantasy, catharsis, and a striving for adulthood; (b) ego-based motives can show themselves as fantasy and may include exclusivity and individuality; (c) task involvement may supercede, or overcome, other motives that occur at the same time; and (d) future success, advancement to a higher level, and desire to teach may be thought of as distinct personal incentives.

**Incentive Environment**

The incentive environment is a complex of the participants' expectations that result from the mutual shaping of their perceptions and actions, in a context of sociocultural influences. To characterize the most important aspects of the incentive environment, I sought instances and currents of events and circumstances that were self-determining or controlling, and I sometimes found a combination of both.
With a non-traditional report card and teachers using written and oral evaluation as informational feedback, pupils tended to give grades and the notion of credit less importance than task involvement. Grades seemed often to serve as social incentives that reflected the importance of tasks, more than as extrinsic rewards or ego-based, competitive incentives. In the extrinsic rewards—usually little treats that teachers gave out—the contingency aspect was generally minimal, so that rather than rewards they seemed to function as friendly, affiliative incentives, enhancing teacher-pupil relationships. The social incentives of peer affiliation and adult approval, though often unspoken, formed a fairly consistent current. Competitive incentives appeared to be relatively inconsequential.

The teachers’ oral feedback to children was generally informational when it referred to children’s work; it tended to sound more controlling when referring to behavior. Feedback given to individuals but publicly before the group served a second purpose of reminding or challenging them.

Teacher-student relationships. The relationship between teachers and students was relatively non-adversarial and familial, not overly demonstrative but warm nevertheless. While flexibility in their demands tended to avert inordinate challenges for some pupils, it left others with insufficient challenge or direction.
**Reasons.** While rationales for curricular themes, units, and topics were often quite carefully explained at their outset, reasons given for specific tasks were less content-relevant. There was little evidence that this type of information influenced personal investment. It seems that children were more responsive to the context of rationale statements—that is, to elements such as the warmth and approachability of the teachers—than to the content of the statements.

**Contextualization.** The web for one-third of the year’s subject matter was planned and spun around an ongoing news event. This study, as well as field trips, guest speakers, class and schoolwide performances and exhibitions, and the occasional pursuit of fortuitous events helped to demonstrate to students how schoolwork is connected to the real, adult world. In contextualizing the children’s work, these practices presented an incentive to do as an adult and revealed action possibilities that could give one a sense of efficacy in the adult world. CM was not spotted after every one of these events, but the seeds they sowed may well sprout in months and years hence.

**Soliciting continuation.** The philosophy of the alternative school included that children should be encouraged to pursue their interests. The teachers believed that CM would be an important result of their teaching, with time given over to independent continuation when needed. But because they felt constrained by
time to stress tasks that reflected the district's subject matter objectives, they generally did not encourage CM in a direct way. Nevertheless, they welcomed CM, and their structure permitted it. From time to time, they proposed task ideas for extra credit for anyone who was interested. Now and then, individuals proposed their own task ideas and got extra credit for carrying them out. Pupils' questions were generally welcomed, particularly in connection with special events. Pupils who did not ask questions were not pressured to do so, but neither were they helped to formulate any. When not torn by the need to complete a lesson, teachers would make suggestions for further research. Occasionally, they deflected perceptive queries and comments, especially when asked by pupils who tended to be unruly or unreliable.

Classroom management. The teachers gave children opportunities to regulate their own behavior and exhorted them to do so, although instruction in methods of settling interpersonal difficulties was not forthcoming. The teachers were not intentionally punitive. However, the consequences of transgressions were not consistently accompanied by explanations of their logic or about responsibility for appropriate actions. So, consequences often seemed controlling rather than informational.
Although talking and movement sometimes disturbed the intensity of pupils' efforts during their generously long work times, many remained persistently and earnestly engaged. The schedule incessantly called pupils to other rooms for arts or remediation, interfering with their attention to classroom presentations and their ability to complete their work. Sometimes those who were interrupted settled back into their work quite readily; sometimes, to the contrary, they seemed irreparably torn away and the quality of their work degraded.

**Choices: Students' curricular autonomy.** The way a task is presented has an impact on whether people perceive it as providing or limiting their autonomy (Deci & Ryan, 1985). Students had many options as to tasks, when to do them, where, with whom, and in what way. So, they could often mold tasks to be consonant with their personal incentives such as involvement and affiliation. Curricular plans were occasionally set aside to accommodate fortuitous occurrences, arousing enthusiasm and personal investment. But when not part of the planned curriculum, neither current events nor meaningful objects brought from home were often utilized to create teachable moments or opportunities to develop strands in webs.

Distant, flexible deadlines were used by some pupils to invest in their work more than they otherwise would. This leeway also allowed many pupils to avoid doing assigned work that might
eventually have spawned CM. Students were not invited to collaborate in development of webs or the planning of options, nor were their suggestions about classroom rules and consequences considered seriously. On the whole, however, the combination of the warm teacher-pupil relationship and the perception of choice seemed to produce a positive effect on personal investment, reflected in pupil statements such as, "They like us to do it."

Taken together, the qualities of this incentive environment, both informational and controlling, seem to confirm Maehr's (1976) hypothesis that a "generally free classroom atmosphere is critical to the creation of CM" (p. 454).

CM in Content Areas

The proliferation of independent writing and reading among the pupils is evidence that aspects of the school's whole language approach, as carried out in this classroom and possibly in previous years, contributed to CM.

Writing stories and poetry. In their writing, children evidenced the many forms of personal investment. A culture of creative writing and writers was eagerly shared by many, thanks in part to: (a) the centrality of writing as a useful, valued, well-defined set of tasks to be enjoyed in this classroom; (b) a lot of time and encouragement to read trade books, ideas from which would end up in children's stories and poems; and (c) contextualized approaches to social studies/science topics that
provoked the imagination. It appears that incentives, or payoffs, in the stepwise writing process included: (a) revising and editing with a partner; (b) sometimes using a computer for the final copy; (c) having teacher and peers hear one's writing, compliment it publicly, and make suggestions; (d) sharing the product with parents; (e) enjoying the composition process itself; and (f) receiving official credit. It is likely that experiencing each other's wondrous poems and stories raised children's expectation of efficacy at doing the same and made it seem an acceptable, plausible thing to do.

Reading. On their own, children re-read books that had been assigned and books that they had enjoyed in the daily readaloud time. They read curriculum-related literature selected on their own or at a teacher's suggestion. Some pursued more than one book on a particular topic or genre or by a certain author. Reading was a culturally acceptable thing to do—a plausible action possibility—due in part to (a) easy accessibility of a wide variety of books in the room and the library; (b) assignments that relied on use of trade books rather than textbooks in social studies and science; (c) the daily readaloud period; (d) the daily schoolwide silent reading period that provided opportunities to zero in on a book with minimal distraction; and (e) a choice of enjoyable projects that one could do on completion of a book. The main incentive to read beyond one's requirements was that of involvement in the story. Other incentives included sharing with
classmates interested in the same books, adult recognition for accomplishment, and the report card.

Pupils who were less confident, less skilled, and more reluctant in reading and writing appeared to do little of it on their own. Some attended pull-out remedial programs, but there was little help with specific reading difficulties in the classroom. There were children with verbal achievement test scores in the middle and low range who read on their own or wrote stories for pleasure. But in general, it was the relatively competent readers and the more fluent writers who did these things. Better readers and writers occasionally helped slower ones, but not frequently or systematically. All in all, independent reading and creative writing were culturally acceptable activities throughout the class but plausible options mainly for those with the skills to do them.

**CM in social studies and science.** CM in social studies and science was manifest in pupils' choices of books to read, TV shows to watch, and things to draw or paint; in talking to their parents and asking them questions about the topics; in fantasy play; in their journal writing; and by applying in real life situations what they had learned. Children repeated school science experiments at home and pondered or re-created what their colleagues had done in the science fair.
Children also carried their schoolwork further as fantasy play and fantasy writing. These manifestations of CM and the attraction of pupils to historical and geographical stories seem to be instances of what Whitehead (1929) called romance:

...the stage of first apprehension. The subject-matter has the vividness of novelty; it holds within itself unexplored connexions with possibilities half-disclosed by glimpses and half-concealed by the wealth of material. In this stage knowledge is not dominated by systematic procedure. Such system as there must be is created piecemeal ad hoc. (p. 28)

He held that the setting in order, the later stages of education, cannot operate without this romance, this "ferment already stirring in the mind" (p. 29). In many instances the ferment of romance is begun before a topic is encountered in the classroom.

Factual reports were required or among the options in the several major units of study, and pupils would occasionally present them to the class. The teachers encouraged reports as a way of learning about fortuitous events. In contrast to creative writing, though, few self-initiated factual reports were noted. There seems ample justification to have expected CM in this form. A sense of self-determination would seem to be inherent in it, coming from permission to: (a) pursue a self-selected topic; (b) defer required tasks; and (c) work in the library, where surveillance was less formal. Certainly there were incentives inherent in doing extra reports: (a) recognition and/or authority when presenting to the class; (b) permission to work with a friend; and (c) extra credit, whether a grade or prize. Indeed,
credit or extra credit was often promised as an incentive for such reports, but pupils stated that it was their interest in the topic more than their desire for credit that prompted them to do the work. It appears that credit may have been seen not as a reward for doing the task but as an endogenous, or inherent, part of the task. It seemed to enhance pupils' moderate interest by validating the importance of the topic or of the report itself (the task form).

Several possibilities emerge as to why CM to write social studies and science reports was not prevalent. First, unlike creative writing, there was not a regular time set aside for presenting factual reports. Second, other than the criteria of clarity, coherence, and creativity used during sessions at the authors chair, the teachers did not give a clear set of criteria that would form a shared basis for discussing such reports—criteria such as the choice of facts, credibility of facts and sources, copying versus interpreting, and opinions of the presenter. Third, during afternoon work time, when factual writing would be most appropriate, there were generally plenty of tasks in the "web" that had to be completed. Socializing and lack of intensity made web tasks take longer.

Fourth, students seemed to spend more time with sources other than encyclopedias—sources such as non-fiction books, narrative accounts, historical fiction, and magazine articles. Information
from them may be more difficult to distill into a factual report. Furthermore, when interested in social studies or science topics, pupils often acted through other acceptable forms—ways that may have seemed more playlike or less likely to draw negative or controlling criticism. Pupils chose to read about those topics without writing; render them in pencil, crayon, or paint; or include them in fictional writing. Thus, to manipulate or extend social studies and science content on their own, children used the same literary and artistic forms emphasized in class. It seems very likely that continuations that crossed subject matter boundaries can be attributed in some degree to the ways curriculum was integrated in the classroom.

What Counts as CM

In Chapter Two, I presented Maehr's conceptual definition of CM, examples he proposed and operational definitions devised by subsequent researchers. Also in that chapter, I emphasized that it is appropriate to view CM as a sensitizing concept (Blumer, 1970), which "gives a general sense of reference and guidance" (p. 91). When CM is defined in operational terms, the distinctive character of its instances and their context are lost. Operational definitions have tended to ignore the all-important qualities of self-determination and being turned on that Maehr values and attaches to CM.
In the course of this study, I have noted many varied instances in which children, apparently without pressure and with other options available, returned to the content and/or form of school activities on their own. In other words, their resumptions were self-determined. Because of the variety of continuations documented in this study and the variety of circumstances surrounding them, I have thought it wise to keep an open mind as to which characteristics should allow us to label an action CM. A brief discussion of the issue follows.

Some continuations seemed quite predictable, as when children read further in a series by the same author or attempted the next page of math exercises. There were some instances in which children appeared to actually repeat an initial activity, as when Penny re-read a book. Yet, I would venture that in every case the repetition was indeed a modification of the initial one: the continual stretching of one's capacities that Deci and Ryan (1985) brought out. Surely, Penny read with different emphases the second time. A resumption might be an elaboration of the initial activity, at a higher cognitive level. Ted, for instance, apparently learned the purpose of the Bill of Rights initially, but his continuation was to apply one of the rights to his own life. Resumption could also occur at a simpler level, as when Andrea copied the names of sea animals from her notes to her journal and when Ann, after learning all about penguins, drew a picture of one.
That a person has applied outside of school some knowledge or skill that has been learned in school would seem to indicate that schoolwork has been put to good use. Acts such as estimating one’s grocery bill and reading a magazine each represent a return to a task area, without pressure, and with other alternatives available. Thus, they would seem to qualify as CM. A quality that perhaps disqualifies them is that the person may not be turned on—interested, fascinated, eager to have an effect by possessing or using or mastering some part of a task or topic. But then, of the many continuations I have related, not every child has demonstrated fascination. I do not think the key is whether the act is casual or deliberate or whether, as I argued in Chapter Two, something is to be learned by doing it. Hence, my distinction as to which actions constitute CM and which do not seems somewhat arbitrary. If CM is a sensitizing concept, then its presence might best be judged on a case-by-case basis, with context in mind. Perhaps different standards should be used when identifying CM in the youngest school children versus students in secondary school. Reasonable investigators may disagree.

Continuing task form versus task content. In this study, I have distinguished between task content and task form, and I have shown that pupils may resume aspects of either or both. By and large, when children resume a task form, it appears that the content is at least not so uninteresting as to turn them off to the task. By the same token, it seems that content would be
resumed only so long as an uncomfortable form does not somehow override the properties that turn a child on. If the form of the initial task is to listen to the teacher give a lesson or read a story, the child's continuation is necessarily self-initiated and, therefore, of a different task form (unless the child asked the teacher to do it over again).

Tina believed it was not particular topics that made her want to read. She seemed to be turned on by reading itself—the form of the activity. Recall her words, quoted in Chapter Four: "The thing I'm most interested in is reading, and there's not a, really, thing you can study about reading, right?" Albert's graduation from reading easy books to chapter books on his own was a change in task form. Patrick learned how to turn maps and other pictures into Jigsaw puzzles. The form was assigned so that pupils might learn the location of countries in Africa, but Patrick utilized the form with other content. It seems that he and others employed the artistic form because they felt more efficacious using it than writing. In effect, they would put content into a language they were better able to speak. Thomas's change from drawing spaceships to sketching seems to encompass both content and form.

When a person is learning how to carry out the complexities of a form, it actually becomes the content. For example, when learning to read certain kinds of words, say, words ending in
"ay," the words can be the content; the task form might be to find them on a page, underline them, and say them out loud. Eventually, those words become an integral part of the text—that is, a part of the task form. The topic of the text becomes the content. In some instances, though, the distinction between form and content may not be useful. A painter, for example, may see a merging of the two.

I have actually used the term task form in two ways. Most of the time, I have used it as Blumenfeld et al. (1987) have done. With their conceptual definition in mind, a task form can be thought of as the "doing" part of an activity, often designed in advance, having a social organization, and resulting in a product that is tangible or not. On occasion, I have used the term more broadly to denote a mode of learning, such as reading or watching a video or examining an object, or to denote a means of expression, such as poetry or construction or sport. For the purposes of this study, the two usages do not seem to pose conflict.

Domain of task. Some tasks that are continued are essentially part of the school culture and not beyond—including math exercises and what Frank Smith (1986) has referred to as "r_bbit" tasks, in which blanks are filled in but little is learned. Other tasks that are continued have action possibilities in the adult world—including projects and similar activities that
treat large enough segments of topics that pupils are enabled to
see the whole and the purpose, not just pieces with indecipherable
purposes. Tasks encompassed in creating a science fair, a class
museum, or an Antarctic treaty conference may have evoked action
possibilities in this way.

CM in talk or thought. If a student talks about a topic or
task he/she has worked on in school, is that CM? Maehr’s examples
of CM, given in Chapter Two, include a child who repeats tales
from school at home. If a student thinks about a topic or task
without actually continuing it or talking about it, is that CM?
To think about a school topic after having left it is generally
desirable. One may be reminded of it in many different ways and
contexts. But thinking about it does not presage resuming or
applying it.

Dodge (1986) defines CM as reading, thinking, or talking
about a particular school topic on one’s own. He asked students
to briefly (a) explain why they did or did not use further reading
material he had supplied on the topic and (b) describe the things
they had said or thought about the topic. I have described my
questionnaire on which pupils told me they had indeed thought
about or continued their project or someone else’s after the
science fair. I have also described instances of children
bringing up school topics to their parents and of interviews in
which children told me of their thoughts, both rational and fantastic, about school topics.

Kremer (1976) measured CM by noting how far students go with materials for a task resumption that is suggested to them (i.e., merely inspecting them, carrying it out, or doing it and asking for still more). Her method seems to acknowledge incipient CM—thinking about the task—but seems to give it less importance than CM manifest in outward behavior. When a child is turned on by a topic or task, is thinking about it less important than actually continuing it? My answer would be that thinking about it may be just as important as acting upon it. Thinking may be part of a ferment that will eventuate in action. Freddy's serious concerns about the plight of Africans would seem to embody that sort of ferment. Thinking may also indicate that the child could benefit from: (a) information about possible actions; (b) an incentive environment that is less controlling and more informational; or (c) access to resources. Ted’s thoughts on the Antarctic treaty conference and the Oldenberg sculpture at the museum might turn to action with the addition of certain resources.

A resumption of a topic or task by talking about it may be a sign that the child has only begun to realize what can be done with it. Talk may also indicate that the person is not aware of possibilities or of resources that could be used in actions.
While Tina may today follow the many books she reads by talking about them, eventually she will act upon things she has read about. Other children may go beyond talking about a piece of work when they have skills to help them do so. Children who have asked questions may use the answers to pursue the topics further, especially if teachers suggest that they do so. I would conclude that when children who are interested in schoolwork think or talk about it later on their own, they are showing incipient CM that requires only another ingredient or two for a resumption to physically happen. CM may be manifest or it may be building inside.

**Sources of the idea and possible pressure to continue.** While the ideas for some continuations clearly emanated from the students who carried them out (e.g., Ted's pharaoh activities), some were suggested or intimated by peers, and others were suggested by a teacher (e.g., the praying mantis work). Pupils generally did not seem to experience teacher suggestions as pressure. Similarly, pupils did not appear to be pressed by their parents to do extra work. Ted's concern about his mother's reactions might have been interpreted as pressure had his performance be less adequate. Further probing in interviews might have detected whether any continuations were due in part to subtle pressure from teachers or parents. If students working for extra credit were working only for that extrinsic reward, CM could hardly be inferred. If, as it usually seemed, the offer of credit
served to signify adult approval and validate their task-based interest, then it would seem correct to infer CM.

**Overlap with other forms of personal investment.** Although Maehr has distinguished choice and persistence from CM, the distinction may not always be useful. Maehr (1976) notes that CM is different from the Zeigarnik effect, by which persons persist at a task in order to complete it or attain a sense of closure. How and at what point a student might experience closure, however, is unclear. One might not feel a sense of closure until he/she finds out more about a topic, for example, how it relates to his/her life and family. In one instance in the present study it was difficult to determine whether a child had manifest persistence or CM, because characteristics of both seemed to be present. Persistence entails continuation when the context remains the same. When Tina chose to remain seated and continue reading a book from silent reading period through indoor recess, she was showing persistence: she did not return to the task but merely continued. But inasmuch as other aspects of the context--the purpose, choices, and rules of the class period--changed, it could be said that she showed CM.

Here is an instance of CM seemingly overlapping with choice. Mrs. Gregson gave a homework assignment to compare lettuce left for several days in fresh water with lettuce left in salt water. Albert carried it out but thought it was optional and did it
mainly for the enjoyment. Was his action an instance of CM? Had the teacher first demonstrated it in class, Albert’s action would clearly be a continuation or variation of the classroom task of watching the demonstration. Albert was exercising choice but not actually returning to a task, since it not first been performed in class. However, since he subsequently performed the work outside the original instructional context, his action could be considered CM.

Occasion for resumption. When should we expect a person to resumed a school task? Does Joey’s return to the concept of trajectory despite the passage of nearly an entire school year mean that the concept was particularly meaningful to him? Did the idea require time to ferment—to benefit from Joey’s further experiences? Or should someone have recognized his interest and provided an opportunity sooner? Some things learned in school are perhaps more appropriately repeated soon and literally; others are more likely to become important for use in later years. Still other things might never be useful as facts or skills but rather as tacit, background understandings. Broudy (1977) contrasts these understandings to knowings that and knowings how; he calls them knowings with.
Possible Alternative Practices

The ideas that follow are not suggestions in the sense of advice to the participants in the study or to readers. Rather, they are possible alternative courses of action that might enhance CM that I have inferred from the interpretations that are my findings.

Adults as resources. When I took time with individuals children to encourage an interest and help initiate a task, they showed flashes of personal investment—choice, intensity, persistence, quality. These instances speak for an environment in which adults other than the teachers are available to work with individual children, not just as tutors but as facilitators and partners, helping them to recognize and act upon their interests.

Material resources. CM can be promoted through tasks from which pupils end up with a product that can be used again. A journal is that kind of product. Another example is the miniature block-print-type stamps the class made on a field trip and took home. One month after the science fair, although only one person claimed to have gone any further with his project, 7 of 28 questionnaire respondents reported that they had not discarded their projects, leaving open the possibility that some might be reconstituted for related work in the future.
Learning cooperatively. For formal cooperative work to succeed, groups should be kept small, members should understand how one another’s roles contribute to the success of their product, each person’s contribution should be distinguishable, and members should have skills in decision making and conflict resolution (Slavin, 1984; Johnson & Johnson, 1985). Concerned that Slavin’s methods seem to rely on extrinsic reward, Kohn (1991) proposes three guidelines that resonate with the valuing of intrinsic motivation:

1. The content must have intrinsic appeal.
2. Training in explicit prosocial behaviors must arise from a clear valuing of caring for one another.
3. Children must be given a role in deciding what to do and how to do it.

In other words, he recommends emphasizing task-based incentives, social incentives (particularly concern for others), and student autonomy.

Rather than placing the science fair near the end of the school year, CM might be promoted by holding the fair early and encouraging students to collaborate on extensions. A second fair later in the year might then show a surprising depth of knowledge and increased commitment.
Using incentives to enhance personal investment. Even in an informational classroom where there are significant choices, students are likely to pass up valuable, educative, potentially interesting activities that do not strike their fancy. Valuable tasks may yet be done willingly if, as in Room 9, social incentives are made salient and extrinsic rewards are used in non-controlling ways (see Condry [1978] and Deci and Ryan [1985], as noted in Chapter One). These incentives may serve to "prime the pump," attracting initial investment in work that could eventually prove very engaging in and of itself. By the same token, care should be taken not to entice pupils away from tasks equally or more educative that they might devise or choose independently when they can find "nothing else to do."

Taking advantage of opportunities to bring out action possibilities. Some pupils, even a verbally acute, academically keen one such as Jackie, could not answer my question, "Has there been anything that you haven't studied in school this year but you've been hoping to study?" Her reply was, "I don't know, really." Although her teachers had told the class of interesting things they would be doing as the year progressed, she did not have her own agenda of activities she was looking forward to doing or trying or learning about in school. Along with the many ways that teachers might encourage CM by providing incentives, optimal challenge, and opportunities for self-determination and efficacy,
I would offer a somewhat sequential set of practical ideas to help children realize action possibilities:

1. Value the occurrence of CM.

2. Make resources available—time, space, materials, and persons—for it to be carried out.

3. Be alert for expressions of interest, both in words and action, especially in regard to unusual and fortuitous events.

4. Take time, on the spot or later, to explore in conversation the meaning of what the child has asked, said, or done. Be careful not to suggest a daunting task, like "Look it up in the encyclopedia," without first discussing what it might yield.

5. Elicit action possibilities—meaningful ways to become involved. Suggest ways. Invite other students to do the same.

6. Consider bringing up incentives that might enhance interest but will not be more salient than the task.

7. Be sure it is understood that doing the task is valued as much as other activities.

This process, especially steps 2, 4, and 5, requires time. For teachers to use time in this way, they must feel confident that their discretion in adapting the curriculum is sanctioned and that personal relevance of content is valued by the authorities. Decisions as to what proportion of time to allocate to instruction in basic skills, to required curriculum topics, and to topics more freely determined by children are difficult and reflect teachers' values, understandings, and autonomy.

Classroom management. While a timeout seat functions for the teacher as a relief from a continual distraction, for the child it
should function as a logical consequence (see Ginott, 1967; Dreikurs & Cassel, 1972).

Tina's concern about the possible punishment that noise might bring upon the class is a hint that teachers should explore non-negative incentives for working quietly or ways of enabling pupils to invoke and enforce their own standards of noise and movement. A two-finger silence signal that belongs to the teachers can be interpreted as an instrument of control. Pupils could be taught how to effectively initiate it or some other system for calling a halt, by themselves, to individual or general disturbances. There is certainly a sense of efficacy in attaining the attention of one's class in a sanctioned manner. There would be a sense of self-determination experienced by students who initiate the signal as well as those who voluntarily comply with it.

Similarly, a "win-win" procedure for peer conflict resolution deserves a chance to work. At first utilizing a teacher to see that all steps are carried out, the responsibility could be ceded to students trained as facilitators. There is efficacy and self-determination to be gained in successfully carrying out a procedure, especially when it allows one to settle problems of one's own and one's peers.

Cooperative planning. To involve children in developing subject-matter webs is a practice that takes advantage of
task-intrinsic incentives and recognizes the topics they find meaningful. Kohl (1976) illustrates webs developed in cooperation with students. He advises, "One must follow the lead of the students, even if occasionally it takes one away from what is familiar, comfortable, or even exciting to one as a teacher and learner" (p. 46).

Cooperative rule making. If the process of setting classroom rules and consequences is informational, pupils who experience those consequences are likely to devote less time and energy to anger or reactive behaviors, leaving more to be invested in their work. One approach is to state the rules outright but with time to question and discuss the reasons. A more time-consuming approach is to let children participate in a democratic process. To determine the feasibility of their proposals, they could investigate the beliefs of persons in school and at home who are responsible for their well-being. As a result, the suggestions they would finally make might reflect not just desires and ideals but understanding of the realities.

Questioning and note taking. Rather than assign textbook questions in which pupils have little or no interest, teachers might plan to elicit questions that pupils themselves, working individually or with partners, bring to a topic, both before beginning to read about it and at several points during the reading. Some textbook questions might become meaningful and
hence more palatable if posed as extensions of pupils' own inquiries. Helping students pose their own research questions to guide their reading should enable them to read more purposefully and understand how research can suit their own purposes. Instruction and practice at strategies for formulating oral questions and evaluating and rejoining answers would enable pupils, especially reticent ones, to feel the self-determination, efficacy, and recognition that can result from active participation in discussions.

Pupils' efforts to take notes from presentations that proceed more quickly than they can write may have detracted from their ability to invest in the content—to think about it and develop questions to clarify it. Instruction in the purpose and practice of note taking might alleviate this difficulty.

**Reading and writing.** Had the teachers found a way to pay more attention to daily journal entries, joining pupils in written conversation, we would have seen more investment there and perhaps more abundance in their already substantial independent writing. Through the journal, teachers can detect and encourage potential CM. For prolific readers like Tina, who was not turned on by writing or doing an art project about her books, post-reading extensions could involve discussion (which she actually did with her parents) and critique, perhaps with an adult or older child who has also read them. This discussion could be followed by
writing a review that incorporates it, printing it via computer with a masthead of her own design, and distributing it. Ted, who similarly disliked writing about his readings, might be turned on by discussing them, especially with a devil’s advocate. A teacher might also try to help him take advantage of his penchant for fantasy and satire by eliciting his off-beat thoughts and suggesting directions he might take to pursue them fruitfully. Involving students in the initial formation of options rather than simply presenting a set that has already been decided might result in more investment. Finally, all that may be necessary to pique their interest in extensions already on the list might be to take a little more time to talk with them about those tasks and the variations possible.

The efficacy of remedial programs for which children periodically leave their classroom has not been part of this study. The consequent interruption of involvement in classwork may be detrimental to children’s personal investment. By the same token, the skills of reading are crucial to the ability to invest and to generate action possibilities. So, the school’s team of educators must ensure that a wholistic approach to language, with its breadth of reading and attention to meaning, include exercises tailored to the needs of individual pupils, to teach them strategies (Goodman, 1986) for working through vagaries of the written word that have perplexed them.
Nurturing personal investment from less cooperative pupils.
In the event that they might be adapted for children elsewhere who have similar characteristics, I offer ideas about ways of working with two more of the children in Room 9. Their patterns of behavior provided a difficult challenge for the teachers, but the two seemed to indicate interests that could be helped to become personal investment:

Opportunities to express artistically what the class was studying seemed to enable Patrick to find meaning in topics in which he otherwise would not. He felt competent at drawing and could be recognized for doing it. It is likely that he would be more willing to talk about something once he had rendered it graphically. An effective way to interest Patrick in subject matter may be to allow him to be responsible for working at it through art. Teachers of the arts should be given sufficient time (a) to plan cooperatively with classroom teachers at the beginning of the year to develop objectives that are complementary rather than conflicting and (b) to act as consultants for integrating the arts into classroom topics.

To interest Patrick in reading more on his own, he could be invited to take part in choosing books to be read aloud to the class or to him individually or to read his own comic books to others. To help him satisfy his motive of adult acceptance and feed his delight in physical involvement, it is appropriate to let
him do physical helping tasks around the school. Although often involved in fights and tussles, he was concerned about people's behavior in class and on the playground. This sensitivity could be actualized by continuing to give him training and responsibility as a games leader and also as a dispute mediator who can utilize the win-win procedure suggested earlier. Settling people's problems rather than getting caught up in them would be a new source of efficacy for him.

As the year progressed, Jesse was increasingly to be found in the discipline room and suspended from school. A successful future in middle school was not a good bet. Yet, if he had been given some specific suggestions for actually working on some of the topics he himself talked about and given credit for doing so, some of the energy her directed toward disruption might have gone into sanctioned tasks that he could be proud of. He might find that efficacy and the satisfaction of his personal incentives could come from schoolwork.

While his self-aggrandizing performances were often disruptive, they showed a sharp ear for language, an ability to reason, and a sense of irony. Also, he expressed interest in real life situations, such as the Antarctic mission and his classmate's refusal to eat meat. His obsession with situations and language of television might be tapped by letting him formulate interview questions on topics that interest him and then interview people on
audio or video tape. He could also be encouraged to suggest TV-related items as topics for discussion, research, or writing his own plays.

Standards. An optimal level of challenge is necessary for intrinsic motivation to occur. Therefore, when pupils fail to complete their work, lowering the standards may not be helpful. One area of motivation study that responds to this issue but is not covered in the present research is that of attribution. Attribution training attempts to shift one's beliefs about success from external factors (i.e., luck and task difficulty) that are hard to control to internal factors (i.e., effort and ability) that are more controllable. Noss's (1979) study of the effects of attribution training on CM is based on landmark research by DeCharms. If helped to see success as more under their control, some students might make a greater investment in finishing their tasks.

Choices and deadlines. Some pupils may be better able to plan their time if they are offered fewer options and permitted to carry fewer unfinished tasks simultaneously. For many, distant deadlines do not promote creativity or extra care so much as forgetfulness and rationalization. The reason may be (a) lack of meaning in the task, (b) lack of skill at planning one's time, or (c) dwindling of the initial incentive of task involvement. Teachers should try to discriminate between assignments that would
be diminished by short deadlines and those that would not. Consistent application of logical consequences when relatively uncomplicated assignments are overdue would seem to decrease the affiliative and task-involvement incentives of distracting activities that might divert a child from his/her assignment. Children should be helped to recognize their own patterns of procrastinating and introduced to ways of planning to get their work done.

Grades and evaluation. The value of curricular experiences should perhaps be judged just as much on the basis of the ideas and voluntary activities they will have spawned in a student as on the level of knowledge and skill that the student can demonstrate from them. Eisner (1985) suggests that in an environment oriented toward personal relevance, evaluation of students would respond to questions such as: "How meaningful was the task to the child?" and "What ideas did she formulate that might be pursued in forthcoming projects" (p. 73)? Answers to questions such as these could be included in reports to parents as well as in feedback to the children.

Suggestions for Further Research

While this research extends our understanding of personal investment and CM, it leaves questions unanswered and opens up others. The subject matter studied during the period of
observation and the forms in which that content was presented were unique to the class that was investigated and to the particular school year. While many of the interpretations from that environment are bound to be applicable to other classrooms, different environments and grade levels would certainly yield possibilities that did not emerge here. What Dodge (1986) and others, working within the rationalistic research paradigm, were constrained to view as a "noisy environment" (p. 108) where extraneous systemic variance is difficult to control, can be seen from a naturalistic view as a rich environment with many mutually shaping (reciprocally determining) factors present and interacting. With these ideas in mind, further exploration of individual factors that may contribute to promotion or hindrance of CM should take place in natural environments, because other aspects of the milieu are not extraneous but integral to the context.

Theorizing about personal investment and CM. "The place of theory in a case study depends to a large extent upon what is known in the area of interest" (Merriam, 1988, p. 57). This qualitative case study, using the data from Room 9 at Southside Elementary School and the concept of intrinsic motivation in Deci's Cognitive Elaboration Theory, has not set out to develop or discover new theory but to extend, or elaborate, Maehr's Theory of Personal Investment. To borrow Strauss's (1987) words, this study
"add[s] density of conceptual detail to [the] evolving theory" (p. 309).

"Grounded theory can be presented either as a well-codified set of propositions or in a running theoretical discussion, using conceptual categories and their properties" (Glaser & Strauss, 1967, p. 31). The present study has taken the latter route. "The discusional form of formulating theory gives a feeling of 'ever-developing' to the theory, allows it to become quite rich, complex, and dense, and makes its fit [of categories to the data] and relevance easy to comprehend" (Glaser & Strauss, 1967, p. 32). This running discussion can be called theorizing. Vallance (1982) states that "the process of theorizing, rather than any particular theory, is one of the most valuable activities available to us in understanding the practical" (p. 4). To theorize in a naturalistic case study means to think in ways that take the continual impact of context into account, trying to see through complexity without oversimplifying (Merriam, 1988).

To theorize requires speculation. The basis of that speculation should be: (a) knowledge already possessed about constructs of interest and relationships among them and (b) data gathered (Merriam, 1988). To these sources are added the personal experiences of the researcher as a major font of insights (Glaser & Strauss, 1967). Hence, to build theory actually requires heavy reliance on the investigator's commentary on the data, not just
the raw data itself (Merriam, 1988). "The root sources of all significant theorizing [are] the sensitive insights of the observer himself" (Glaser & Strauss, 1967, p. 251).

Research from different backgrounds. In interpretive research, the development of theory (i.e., theorizing) may be influenced by the personal background of the investigator. The influence may occur when determining what categories of data are important enough to include. Personal background can certainly influence, as well, the immediate interpretation of observation and interview data. It can also affect the sampling and the rapport with participants. In portions of Chapters One and Three, I have informed the reader of aspects of my experience and how they may affect the present research. However, it is appropriate at this juncture to point out that at the very same research site at the same time, a person from a different culture, American or otherwise, might well have seen things that I did not. The person's conclusions may or may not have conflicted with mine; they would certainly have added to them.

Perhaps more importantly, the same would be true had this research been carried out by a woman. My experiences with CM as a child were surely different from those that a girl would have. I have noted earlier that I felt especially comfortable with the male teacher because I sometimes saw in him a reflection of myself, as when he related well to turned-off boys. After
completing all observations and interviews, I realized that
despite efforts to get a well-balanced sample, I had avoided
certain girls who seemed reluctant to talk to me. From the
end-of-year questionnaire, however, it seems that they thought it
was I who was reluctant to talk. Any one of the children
interviewed might have drawn a somewhat different picture in an
encounter with a woman rather than a man. For further research,
then, it would be worthwhile to do a naturalistic study similar to
this one but conducted with the benefit of a female's experiences.

Methodologies. Although the present study has described
instances of CM and their genesis in more detail than previous
studies, it has been spread among nearly fifty children. Greater
detail would be possible if the number of participants followed
were kept small. Other approaches to limiting the breadth and
increasing the depth of a study include: (a) to concentrate on a
particular content area, for example, social studies; (b) to find
a single, clear instance of CM and then use interviews to delve
into it, describing in great detail the thoughts and actions that
went into doing it and resuming it; and (c) to describe in detail
how children use classroom time when their required tasks are
finished and during interstices, or transition times. As the
findings of this study have shown, CM can emerge after long
periods of time. Long-term studies, even longitudinal studies
extending over several years, would capture some of those
instances of CM and their essential attributes.
Drawing upon Maehr's and Deci's theories and interpretations of empirical data such as in this study, investigators could set CM as a major class objective, and use instructional and curricular strategies to enhance it in an ongoing class.

**Developmental study of CM.** I had hoped to find students engaging in "projects" based on schoolwork. However, those interviewed in this study had little to offer in that category. It would seem that middle and high school students, who have more mobility and access to a wider array of resources than younger children, are more likely to be involved in projects, perhaps tying together several school tasks. Detailed descriptions of independent projects of older children would provide a developmental contrast to the CM that has been described here.

**Task form and content.** To study further the antecedent condition of meaning that Maehr calls task design, one would probably focus a more microscopic analysis on the form and content of individual tasks (Blumenfeld et al., 1987), including aspects such as procedural complexity and evaluative clarity. Research questions could arise from the observation that CM can involve only a task's form, only its content, or both. Berliner (1983) describes a diverse set of classroom activity structures, such as one-way presentation (lecture) and construction (project). Using his typology, which is commensurable with the notion of task form propounded by Blumenfeld et al., it may be possible to discern how
the different types of activity structure might contribute to the generation of CM.

Utilizing the stages, or events, of instruction set forth in the instructional design model of Gagné and Briggs (1979), it is possible to analyze instructional sequences that have eventuated in CM. It might, for instance, be learned that in a particular context the stage of "enhancing retention and transfer" has been salient to children who experienced CM, while in another context the stage of "informing the learner of the objective" has been crucial to the continuation.

**Action possibilities and contextualization.** In environments where continuing independently is clearly valued, a researcher might investigate the impact of teachers' suggestions to do so. One could compare (a) CM that follows when teachers suggest tasks to do on one's own to (b) CM that follows when no specific suggestions are made. In interviews, children could be asked specifically what action possibilities they have been aware of and what makes each one seem plausible or implausible.

I have proposed that CM and other personal investment may be fostered by student perceptions that the things they do in school really relate to things that can happen or that they can be or do in the outside world. One might analyze school activities to find qualities indicative that the activities are, in Bruner's terminology, contextualized or decontextualized (Condry, 1978);
one might then investigate the extent and kinds of personal investment that ensue.

**Personal characteristics.** There are many aspects of person and environment on which further studies of CM could focus. Our understanding could be enhanced by more lengthy, in-depth interviews that probe feelings of self-determination, sense of efficacy, perceptions of challenge, and personal incentives. Other personal characteristics that could be probed in interviews for their relation to CM are: attribution or locus of causality (Weiner, 1984), self-regulatory style (Ryan, Connell, & Deci, 1985), and outcome expectations (Bandura, 1977). Such research could take the form of case studies of individual children or comparative studies of several children.

Differences in CM among students who contrast in their level of academic achievement have been studied within a rationalistic paradigm, but qualitative differences in such pupils' perceptions and their continuations have not been examined. Are children who might be described as turned off to school, such as several in the present study, more likely to show CM using forms of representation other than verbal or textual?

The present study has not included the concept of reactance, which is when a child responds to a controlling event by defiance (Deci & Ryan, 1985). Obviously, a child who defies a demand to carry out an academic task is not investing in it. However, it
would be interesting to learn whether defiance in regard to a particular task or refusal to exhibit a particular behavior carries over to investment in other tasks.

**Home and sociocultural context.** Interviews of parents and other significant adults in more depth than was possible in this study, as well as home observations, could better illuminate how parents and other elements of the non-school environment facilitate or hinder CM. Further interview questions probing the meaning of "nothin' else to do," that is, available activities a child passes up in order to continue something from school, might find patterns in the resources and incentives of the home environment that are significant to CM. One might investigate how similarities and differences between the incentive environment at school and at home might influence personal investment in either place. The resources and the incentive environment at home can be seen as parts of the sociocultural context antecedent to personal investment. Comparisons of children of widely diverse backgrounds are likely to reflect different community attitudes toward schoolwork and voluntary continuation of it.

**Feedback.** The meaning of feedback and extrinsic rewards could be explored by questioning students immediately as to whether they perceive them as informational or controlling. Through interviews, it is possible to compare pupil perceptions of feedback received privately to that received publicly and to that
received indirectly from public statements directed toward other pupils but applicable to themselves.

Grades as complementary incentives. I have cited evidence to suggest that for some children personal investment emanating from their interest in a task was complemented by personal investment grounded in other kinds of motives, such as high grades. They said that without the expectation of credit they would have invested in their task because of interest alone. Whether they would indeed have done so is unknown. More intensively focused observation and further questioning could provide clues. In interviews, I received the impression that the significance of the credit was not as an extrinsic incentive but as a validation of the importance of the interesting task. Interviews could probe further to learn more about the role that credit plays as an incentive. To learn whether the incidence of CM would be greater or less for individual pupils when grades or other extrinsic or social incentives accompany task-based incentives, a methodology of manipulation of incentives plus observation and questioning might be profitable. Still, to anticipate CM would be highly problematic because of the complexity and fluidity of the incentive environments in class and at home.

Collaborative rule making. I would speculate that some children take most classroom and school rules for granted, so that participation in making rules is not important to their motivation
to do schoolwork or take it further. For other children, to be told that they will take part in making the rules may bring out a sensitivity to the appropriateness or fairness of rules that influences their sense of self-determination, their expectation of efficacy, and ultimately their personal investment. A research study could focus on how pupils perceive the integrity of collaborative rule making and how they perceive it to influence their conduct and their decisions to invest in schoolwork.

Cooperative Learning. Allen (1979) found that fifth graders working cooperatively in science showed more CM than those in a competitive structure. Does CM evolve differently in the minds of children who work in individualistic, competitive, and cooperative environments? What is it within the task structure and reward structure that seems to contribute to personal investment? Is the salience of particular incentives different in cooperative as compared to individualistic structures? Although Allen gave students questionnaires asking for their interpretations of classwork in general, research such as his could be enhanced by interviewing students about their perceptions of specific experiences. Keeping the present study in mind, it must be recognized that cooperative learning proceeds differently in different contexts.

Reasons to Invest. To make inferences about the reasons given by teachers, the present study relied almost exclusively on
observations. Pupil interviews could be directed toward exploring the salience of the reasons a teacher gives for assigning particular content or task forms. What does the child perceive in the reasons and their context that shape that salience?

**Personal investment in differing reading matter for research.** In this study, students used a variety of textual materials for reference. What are the qualitative differences in the effort children invest in doing research from large reference compilations such as encyclopedias, individual non-fiction trade books used for reference, and narrative or literary non-fiction? Are some children more turned on by one than the other? If so, why?

**Encouragement or discouragement of CM.** The teachers responded to possible indications of further interest by children in different ways: they encouraged some to look further but deflected questions and comments of others. Although the evidence I have cited is rather scant, it hints at an unintentional pattern in those responses. Kenneth was very cooperative and liked to get suggestions for ways to do more, especially if he could get extra credit for them. Jesse was uncooperative and tended to avoid work. The teachers grant the possibility that they were more likely to suggest follow-up ideas and extra credit to cooperative pupils whom they perceived more likely to pursue them than to difficult pupils who might need more guidance to do so. Such a
pattern would be easy to fall into. Yet, for students who tend to be disaffected and turned off, plausible suggestions and assistance to follow up their own questions and comments might help to turn them on. It might be worthwhile to investigate whether and how less cooperative pupils would invest themselves in extra credit options if teachers made a special effort to offer and facilitate them.

A Final Word

It should be borne in mind that research in CM is bound to reflect a value orientation. Allen (1979), for example, in a closing statement, implies that the major value of his study is that children should adapt to society (see Eisner, 1985). Allen (1979) says, "Inevitably, society must be assured that students not only can perform the tasks that society has defined as being important, but that the students, as well, come to define these tasks as being important" (p. 128). A number of the studies reviewed in Chapter Two are efforts to hone instructional systems (e.g., Herndon, 1987, 1988; Rieber, 1990; Seymour, 1986). As such, they appear to espouse a value orientation that Eisner (1985) has called "curriculum as technology," in which the primary aim is not to find subject matter that is meaningful or to help pupils see its relevance so much as to teach given subject matter more effectively and/or efficiently.
Continuing motivation can also be a valued outcome if one holds personal relevance as an orienting value for the curriculum and accepts the notion that children who find meaning in their school experiences tend to invest themselves in those experiences. I believe that educators have tended to be interested in motivation mainly as a way of increasing achievement and have underestimated its worth in promoting personal growth and life satisfaction. This study has been carried out in recognition that intrinsic motivation can and should be allowed to result in those ends. It is hoped that this study will help to bring about a better understanding of CM so that it becomes more common, not for its own sake but as a natural result of education that enables children to have school experiences that are meaningful to them.
APPENDIX A

INFORMATION SHEET FOR TEACHERS

ABOUT PROPOSED RESEARCH
PROPOSED RESEARCH STUDY AT __________ ELEMENTARY SCHOOL

by Larry Hoffman (7/29/89)

This is preliminary information for teachers about a study that I hope to conduct during the 1989-90 school year.

Who am I?

I am a graduate student at Ohio State U., 41 years old, working to get a Ph.D. in education. From 1969 to 1983 I was a classroom teacher at each grade from pre-k through 5th. For several years I taught in Montessori programs. In Ohio, my teaching certification is K-8 and reading K-12.

In what capacity am I doing research?

To get a doctorate, after completing the coursework one must carry out a study which (a) reflects a thorough understanding of theory and practice in a chosen area of education and (b) makes a real contribution to the body of knowledge (and, hopefully, to children).

What area and topic I have chosen to investigate?

I am going to investigate and describe the incidence of children continuing, extending, or utilizing schoolwork on their own. This occurrence has been named "Continuing Motivation" and may take place in school or out. I hope to learn how aspects of the child, the learning environment, and the home may contribute to it.

Why have I chosen this topic?

I am interested in the interplay of students' feelings, attitudes, expectations, values, and aspirations (the "affective domain") with the content and the form of their schoolwork. I am sure that some of the activities children do on their own have been sparked by schoolwork. I believe it is desirable that children find their school experience applicable to their own worlds. I hope my study will provide evidence that school can foster in children a sustainable investment in work that is both worthwhile and meaningful to them personally.

Why your school?

I want to do my study at a school where (a) values and methods are consistent with my own and (b) students can be observed doing work which they have chosen. I believe these things may be true at __________. A third criterion is that (c) teachers are interested in collaborating in the research. Before I begin, I need to find out whether this is so.
What exactly do I want to do?

At this stage, much is still to be decided. I expect to be most interested in the oldest students, but younger pupils may be important to me, as well. I don’t yet know whether I will need to focus on several children or on entire classes. 10 weeks might be sufficient to do the study. A shorter period might be more convenient for all; a longer engagement is more likely, though, because it might yield more credible results. Some of my research may be conducted elsewhere, perhaps in a middle or high school. The methods I plan to use are:

(a) Observation. On a regular basis, perhaps 4 days a week I would spend periods of about 2 hours a day in a classroom, sitting at the side and writing detailed "field notes." I would later transcribe the notes into coherent form.

(b) Video recording. On several occasions, I would set up a video camera (or cameras) in the room to tape the action. Participants would later be asked to view the tapes and describe what is going on in them.

(c) Interviews. I would interview children at unobtrusive times, asking about their purposes, their perceptions of their work, school, and their daily lives. I would interview teachers to learn their philosophical beliefs, rationales for curricular and instructional decisions, and perceptions of their students. Parents might be interviewed regarding their perceptions of their child’s work, home life, and school experience. Interviews would generally be audiotaped. Their contents would be confidential. A tape would be accessed only by me for the research and otherwise accessible only to the interviewee.

(d) Questionnaires. Sets of written questions might be presented to individual students or a group on perhaps two or three occasions. They might deal with student perceptions of self or environment. Teachers would be informed of their purpose and asked to cooperate in administering them or allowing me to do so.

(e) Student records. Information regarding achievement scores, aptitude testing, and academic levels might prove helpful. Rules of confidentiality would be followed.

(f) Student logs. Pupils may be asked to keep, over a period of time, a brief written record of things they do on their own. Teachers would be asked to help pupils assume responsibility for its maintenance.

(g) Participation and interaction with pupils. I would develop a role in the classroom whereby I would interact informally with students as they carry out their work. It might be arranged that I assist the teachers at certain times, and students would be aware of my availability at those times.
How and when might I impose upon you?

I would be in your classroom, observing and asking questions of you and your children about their work and about how I might do a better job of this study. I would undoubtedly be imposing upon your time and territory. When I was teaching, I was not always eager to have observers. In this project, I would try to be sensitive to your needs and respect your wishes. If there are no hitches in the design or approval process, I would begin at the very start of the school year. I would be eager to begin cooperative planning with you before the opening of school.

Of what value might my presence and my work be to you?

I would hope that your contact with me and my work might touch off ideas about teaching that might not otherwise occur to you. My dissertation could be a vehicle for demonstrating the successes that people at __________ feel. By the same token, I would hope that through my work we might see some of what is necessary to do a better job as educators. If I do my study well, educators who read it will have an opportunity to learn from your experiences.

Would you have anything to say about my findings?

I would be asking you what interpretations—what meanings—you give to the things I have observed. You would be welcome to inspect transcripts of field notes of observations made in your room. As I draw final conclusions, I would check them out with you, to see if you find them credible. Your suggestions and insights will be valued and incorporated throughout.

What happens to the results and the finished product?

I will have to pass an oral examination to defend my rationale, procedures, and interpretations. The document itself will include chapters describing each of those things, plus detailed descriptions of children’s experiences in school (with identities of all participants scrupulously masked). The dissertation will be printed and bound, available in the O.S.U. libraries and for purchase by order. A copy will be given to your school.

Don’t I have to get permission to do all these things?

For sure. The proposal has been approved by my committee of professors. It has to meet the rigorous requirements of the university’s Human Subjects office. Permission must be obtained from the school district administration. For some of the interactions with students, parental signatures will be required. I will be accountable for my actions to you and your principal.

Thank you for your attention. I hope to be working with you and will keep your principal informed of the progress of my proposal.
APPENDIX B

GENERAL CONSENT FORM FOR PARTICIPATION
CONSENT FOR PARTICIPATION
IN SOCIAL AND BEHAVIORAL RESEARCH

I have read the Request for Parental Permission for my child to participate in research entitled:

A STUDY OF CONTINUING MOTIVATION

Lawrence M. Hoffman, authorized representative of Dr. William D. Taylor, has explained the purpose of the study, the procedures to be followed, and the expected duration of my child's participation. Possible benefits of the study have been described as have alternative procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Further, I understand that I am (my child is) free to withdraw consent at any time and to discontinue participation in the study without prejudice to me or my child.

I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

I consent to my child's participation in this research study as described in the Request for Permission, including that my child may do the following: talk with the researcher; keep a log; be interviewed on tape; take part in the class videotape; complete an ungraded test or questionnaire; and that his/her school records may be examined by the researcher, for this study only. (If for any of these activities you decline to give consent, you may cross them out above.)

Signed: ____________________________ Date: ____________________________
(Parent)

Signed: ____________________________ Witness: ____________________________
Lawrence Hoffman (principal investigator or authorized representative) (not required)
APPENDIX C

DETAILED REQUEST FOR PARENTAL PERMISSION
REQUEST FOR PARENTAL PERMISSION

My name is Larry Hoffman. I have been a teacher for 14 years. Now I am studying to get a PhD at Ohio State University.

I am carrying out a research study. My goal is to learn how we can make school subjects more appealing to children by paying attention to the things children are interested in.

The principal and teachers at Elementary School have given me permission to visit your child's class on a regular basis to carry out my study. Most often, you will see me observing the teachers and children at their work. I plan to be there through most of the fall and at certain times during the winter and spring.

What will the children gain from my being there?

1. To the children, I will be an encouraging adult who is paying attention to them and interested in their work.
2. At times, I will help them as a teacher would.
3. To the teachers, I will be another experienced teacher with whom to discuss better ways of working with the children.

I expect to do several things:

1. Talk with the children.
2. Ask them to do some short pieces of work.
3. Interview individuals on tape cassette.
4. Videotape the class at work.
5. Examine student records.
6. Give students a questionnaire or short test.

I NEED YOUR PERMISSION to include your child in my study.
To give permission, please sign the enclosed letter of consent.

What exactly will I be doing in the classroom?

1. While the children are at their work, I will sometimes talk with them. I will ask about the topics they are choosing and what they think of the work.

2. I plan to ask children at some point to keep a log (a brief daily list) of things they do in their free time when not at school.

3. I will interview individual children, one-to-one in a corner of the room or an office. I will ask them about their free-time interests,
their thoughts about school, and other aspects of their daily lives. Our voices will be recorded on tape, so I can listen to them later and not forget what was said. No one else will hear the tape. Only the child and his/her parents would be given access to the tape, if they so desired. All tapes will be erased when the study has been completed.

4. I plan to do a small amount of videotaping in class. The camera(s) will be in full view, and parents will be informed in advance of days that it is to be done. The purpose is so that the children and teachers can look at the video of themselves and help me understand what was happening and why. No one outside of the class would see the video. After that, only the teachers, principal, researcher (myself), and parents of the children on a tape would have access to the tape, if they so desired. The tapes will be erased when the study has been completed. A teacher or the principal will witness that they have been erased.

5. Under the supervision of the principal and teachers, I may need to examine students' standardized test scores and other records from their cumulative folders. If this information is accessed, it will be for the purpose of discussing the kinds of characteristics that make this a typical classroom. I fully understand that no confidential information about any child is to be divulged during or after the study.

6. I may ask students to answer questions on a written questionnaire or inventory. The questions would be similar to those in our interviews. The answers would enable me to learn more about the motivations of each child. These would not be scored or graded. Nothing would go into the students' records.

Children will not miss any lessons by taking part in this study. The teachers will always be in charge of deciding when it is appropriate for me to speak with the children.

Confidentiality: All information obtained from children or adults as a part of this study will be kept STRICTLY CONFIDENTIAL. It will be used only for the purpose of the study. When the study is complete in its written form, all names will be changed. NO NAMES of any of the participants or any information that might identify them will be included. The school will not be identified.

It will be most helpful to this study if your child has your permission to take part. If a parent should find it necessary to decline permission for a child to participate in some or all parts of the study, it will still be possible for the study to be carried out. Because the classroom is extra large, the child will be able to continue to do regular schoolwork there without interruption or undue attention, while the research is carried out elsewhere in the room.

For further information: If you have any questions about this sheet or my study, you may contact me by calling the school. You may also address questions to your child's teachers or principal, if you wish.
APPENDIX D

FORM FOR TEACHERS TO NOTE INDICATIONS
OF STUDENT PERSONAL INVESTMENT
INDICATIONS OF PARTICULARLY HIGH PERSONAL INVESTMENT

E - expressed EAGERNESS to do some work
Q - asked quite a few QUESTIONS about a topic
T - TALKED about some work with you or others
I - worked with INTENSITY
P - PERSISTED even though time was up
W - produced relatively very high quality WORK
A - ASKED for more
R - RETURNED to topic or task after assignment was finished

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APPENDIX E

QUESTIONNAIRE ABOUT STUDENT PERCEPTIONS OF THE RESEARCHER
1. What is he trying to find out?

2. What do you think of him?
   Why?

3. He helps me to

4. He seems like a teacher when

5. I don't like when he

6. Do people act differently when he is nearby?

7. He has helped me.  
   He has bothered me.  
   He has disturbed my work.  
   He has been nice to me.  
   He pays attention to me.  
   He makes me nervous.  
   He is interested in what I do.  
   He seems like a teacher.  
   He asks silly questions.

   A LOT  A LITTLE  NO

8. When he is observing  
   I just act normal.  
   I try to do extra well.  
   I like to talk to him.  
   I don't pay attention to him.  
   I try to act in a way that will make him go away.  
   I pretend I'm not paying attention to him, but I am.  
   I try to fool him.

9. When he asks me about myself, I am usually  
   I very honest.  
   I pretty honest.  
   I not very honest.

10. I would like him to know
APPENDIX F

SAMPLE OF QUESTIONS ASKED IN STUDENT INTERVIEWS
Work Done on One's Own, and Incentives

What kinds of things do you do on your own (when you're not with someone else: or, things you do with a brother or sister or a friend that are your idea)?
--Do you ever do things on your own that are not really play?
--Do you ever do projects?
--Do you ever make things on your own?
--What? Where?
--What did you do with it?
--Did you feel you were going to get something out doing it?
--What? (outcome expectations)
--Where did you get the idea for doing it?
--SEE LIST for possible sources--TV, comic, family trip, etc.
--What was better, making it or having it when you were finished?
--Do you usually like to tell someone about it or show someone?
--Who? What do they usually do or say?
--What do you expect them to do or say?
--What if the person doesn't care?
--What if the person doesn't want you to do it?

What's the most complicated thing you've ever done on your own--I mean the thing that you had to do the most thinking on? (trying to get at cognitive level here, rather than number of steps)

Do you ever do things on your own that are sort of grown-up?
--Are there some grown-up kinds of things that you like to use? Why?
--Do you like to use tools? What kind? What for?
--Do you have any at home?
--Do you like to use computers? Word processors? Why?
--Do you have one at home?
--Do you ever do something on your home computer that you learned at school?

** Do you ever do school-kinds-of-things on your own? Do you ever do something on your own that you first got the idea in class?

Have you done anything on your own where the idea has come from the field trips or the speakers we've had? Or singing or dancing or performing at school?

--Do you ever build things on your own?
--Do you ever write things on your own?

Do you collect things?
--How do you decide what to put in your collection?
--How did you get interested in them?
--Was it someone else's first?
--When did you start collecting?
--Have you collected other things?
--Where did you first get the idea about collecting them?
--What do you do with your collection? Do you do anything to find out more about them? Where do you keep it? Do you show people? Are you expanding the collection? How?
Do you like to be different in the things you do?
Do you sometimes do things just because nobody else is doing it?
--- Do you sometimes do that in class? (e.g., read Alice in Wonderland
    while people sitting in the circle)
--- Why? Explain.
Are you ever so mad or so upset or so disgusted that you don’t feel like
doing what the class is doing? Can you give me an example?
--- What gets you that way?
Did you like Alice in Wonderland?
--- Where did you get it?
--- How did you decide to read that?
Do you ever read books on your own?
--- Did you get the ideas to read them from school?

>>> Personal Investment

What is something in school that you’ve done very, very well—just a
terrific job?
Can you name some kind of classroom activity that you’ve really really
been anxious and eager to do—something you really looked forward to
doing and could hardly wait to do it?
--- Where did you first get interested in it? At home?
Can you name something that you have been so interested in that you have
asked people questions about it so you could know more about it?
Has there been any topic or thing that the teacher or a student has
brought up in class that you have been so interested in that you have
asked the teacher questions about it so you could know more about it?
What is something you’ve learned or found out about in school that
you’ve talked about later with your friends?
What is something you’ve learned or found out about in school that
you’ve talked about later with grownups?
Has there ever been some schoolwork that you’ve liked so much that
you’ve asked for more?
--- Did you feel you were going to get something out doing it?
--- What? (outcome expectations)
APPENDIX G

QUESTIONS ASKED IN SHORT, END-OF-YEAR INTERVIEWS
END OF YEAR
Student Interview Questions

Feedback

How do you know if you're doing your work properly?
How do you know if you're doing a good job, an excellent job, or a
not-so-good job?
How do you know if you're doing your stuff right or wrong?

How do your teachers ( ) let you know if your work is OK or
not OK?

Where do you get help with your work when you need help?
--What kind of help would you need?

When a teacher ( ) comes over when you're working, is it
usually because he's got some ideas for you or things you can use?
Or is it usually to make you do something or to change something?
--Would you prefer he did that or just stayed away? Or she
or her

What is his mood when he comes over to your table or asks you to
come and speak with him about some work?

Perceived Self-Determination

In this class, do you get to choose what you want to find out
about?
--Can you give me an example?

Resumption Perhaps Not Possible

If in the last week of school you could pick out something that
you've done earlier this year or in some other year at school and
do it again, or do some more of it, or learn more about it, or
talk about it in class, what would it be?
APPENDIX H

TENTATIVE QUESTIONS FOR TEACHER INTERVIEWS
A Study of Continuing Motivation

Interview Questions for Teachers

(10/12/89)

These are questions to participating teachers about perceptions and philosophies regarding their professional field and their place in it. Responses are to be kept confidential.

philosophy
What should education aim for?
What should be the main purpose or purposes of school?
Do you feel that most schools in America or anywhere are aiming for those things?

expectations
What do you feel education can accomplish?
Where do you think American education is heading?

theory
What are your basic beliefs about how children learn and grow and the extent to which they can learn?
What are the things necessary for one's teaching to be successful/effective?

self-perception
Do you see yourself as an educator as well as a teacher?
—What does the term educator mean to you?
What do you see as your personal role as a teacher/educator?
What are your expectations of your capabilities as a teacher/educator?
What do you see as your strengths and weaknesses as a teacher/educator?
In what ways do you consider yourself as similar to or different from teachers elsewhere?
In what ways do you consider yourself as similar to or different from other teachers in this school?
What do you think kids like (year in and year out) about being a student of yours?
What do you think kids dislike (year in and year out) about being a student of yours?
How often do things happen as you would want them to in your classroom (year in and year out)?

attitudes
What do you feel is true or important about the kinds of attitudes students have about various things?
Can teachers influence student attitudes?
—How?
Do your feelings about student attitudes affect your teaching?
—How?
motivation
Before this year, have you ever thought about student motivation?
--What has been the nature of those thoughts?
What is the importance of motivation in society?
What is motivation in children?
What is motivation in children in school?
What is the role of motivation in school?
Do you feel there is a relationship between motivation and achievement in school?
Do you feel there are different kinds of motivation?
--How so?
--Do you have any preferences as to how student motivation might best be attained?
Do your feelings about motivation affect your teaching?
--How?
Given the definition of "continuing motivation," what do you feel is its importance for children?

the program at 5th Avenue and this year's in particular
What is your understanding of the purposes of the program at 5th Avenue and this year's program, in particular?
What is your understanding of the ways the staff is expected to achieve the purposes of the program?
What are your expectations of the program?
What makes this school unique?
What makes this school like many others?
What are your opinions of the program and its various aspects?
--Do you feel the expectations of the program are realistic, fair, appropriate?
What do you see as the advantages of teaming with your partner this year?
To what extent do you feel the curriculum is your own vs. one that is given to you to carry out?

this year's children
How do you see them, or individuals among them, as unique?
Do you see the two of you as having a particular job to do with these children in this classroom?
What are your expectations of them, in general and for particular individuals?
What are your feelings about them?

the district's curriculum
What is your opinion of the district's curriculum?

* Ask some open-ended questions that can lead to divergent thinking.
* Let the teachers pose some questions of their own that they would ask of themselves.

If you could do one thing to..., what would it be?
APPENDIX I

MEMORANDUM OF AGREEMENT
MEMORANDUM OF AGREEMENT

*** further terms of agreement ***
*** between professional participants and researcher ***

in

A Study of Continuing Motivation

The proposal for this research study has been approved by both the Human Subjects Review Committee of The Ohio State University and the Office of the Assistant Superintendent of the Schools. The researcher has, to their satisfaction, answered all necessary questions pertinent to protection of the privacy, safety, health, and welfare of the participants; provided the participants a description of the research; and obtained their written consent.

Educational research carried out in the natural classroom setting over an extended period depends for its success upon understanding and cooperation between participants and researcher. The purpose of this memorandum is to specify some important areas of agreement that exist in addition to those in the terms of the previously approved documents. It may also serve as a model to be adapted by other researchers.

Time schedule. The researcher and participant-educators have agreed informally to a tentative timeline for the gathering of data. It is expected to span the school year, the frequency and length of visits varying with the particular research activities at each stage of the study. It is understood that for the researcher to obtain optimum access to significant classroom activities, relationships with students and parents, and opportunities for related literature review and data analysis, the timeline is subject to revision. The researcher's projection of time necessary to spend in the classroom may be expanded, condensed, or spread over a somewhat different set of weeks and months during the 1989-90 school year.

Availability of field notes. The researcher records his daily observations in the form of field notes. In their incomplete draft form, these notes are confidential to the researcher. Once a day's notes have been transcribed via word processor and printed out, they are available for the teacher-participants to read, if they so desire.

The Interpretive nature of the research. The study follows an interpretive paradigm. In other words, the pre-eminent assumption is that there is no single, objective Truth in a person's view of what exists or occurs in a classroom, a teaching incident, a school, a form of education, or indeed, the world. Every understanding is an interpretation. The understandings each person derives from his/her observations are very much a function of the knowledge, past experiences, and biases of the person and the circumstances in which the observations occur.

Undoubtedly, a participant will not experience every event or circumstance in the same ways as an observer (or, for that matter, as...
another participant). Thus, two parties may not come to the same conclusions about It. While it is essential that the researcher seek out and consider the perceptions of participants, the researcher is not obliged to adjust his findings to conform with their interpretations. That kind of constraint would severely compromise the integrity and value of the research.

This study is not set up to be a systematic evaluation of practitioners or the quality of their work. To read it as such would be incorrect and unfair. The research is meant to paint a clearer picture of the schoolwork that students find meaningful, so that we might foster in them a sustainable investment in worthwhile activities.

In a paper such as this, judgments stated or implied about instructional practice are stringently bounded. Personal preference of the author is not an adequate reason for judging a practice successful, unsuccessful, appropriate, or inappropriate. It is his duty to seek out and clearly state his biases—philosophical, theoretical, personal, and political—that may affect the things he focuses on and how he interprets them. The write-up will clearly explain the concepts, theories, and values on which the author's interpretations of the data are based. Any judgments inferred by readers will, it is hoped, be based upon an appreciation of those concepts, theories, and values.

**Future publications.** Publication of the dissertation does not preclude submission of papers—to professional conferences, professional journals, or other educational publications—that may deal entirely or in part with data collected in the course of the study. Confidentiality of records and anonymity of participants would be maintained. To ensure the credibility of findings, the participant-educators may be asked to contribute further to the interpretation of data for such papers and will be credited for such assistance, if permitted by the publication or forum. Should the teachers become collaborators in the writing of such papers, they will be considered co-authors.

**Premature termination.** The consent document provides that participants are free to withdraw from the research at any time without prejudice. In addition, should any of the parties, including the researcher, foresee a possible need to withdraw or propose major changes, he or she is obliged to confer with the others at the earliest possible time. In the remote instance of unforeseen circumstances under which the researcher would find it necessary to discontinue the study, participants would be debriefed to the fullest extent possible.

The terms of this agreement are meant to be reasonable and mutually agreeable to the participant-educators and the researcher. The terms may be modified by mutual consent.

________
participant

________
researcher

[Signature]

January 5, 1970

date
APPENDIX J
REQUEST FOR PERMISSION TO INTERVIEW PARENTS
To: Parents of 's Class

From: Lawrence Hoffman, OSU Doctoral Student

Earlier this year you consented to allow me to include your child, _______________ in A Study of Continuing Motivation that I am conducting in his/her classroom. You will recall that its purpose is to learn how we can make school subjects more appealing to children by paying attention to the things children are interested in.

In order to get a clearer picture of those interests, I would like to ask you some questions about your child, his/her schoolwork, school experiences, and home experiences. Our conversation would be recorded on tape, so that I can listen to it later and not forget what we have said. Your participation would be very helpful to me, and it would contribute to the study’s usefulness to other educators in helping their students.

As before, your participation is entirely voluntary. The interview will be STRICTLY CONFIDENTIAL. Real names will not be used in the study, and no identities of participants will be revealed. No one else will hear the tape. The conversation will not be shared with your child’s teachers unless you give permission to do so. Only you and I will have access to the tape. It will be erased when the study has been completed. The school is not interested in whether you agree to be interviewed or not. After the interview, you are free to withdraw permission for me to use information from it in my study. Your decision to participate or not will have no bearing on your child or his/her grades or record.

For further information: If you have any questions about this request or my study, you may contact me by calling the school. You may also address questions to your child’s teachers or principal, if you wish.

If you have read and fully understand this letter and your questions have been answered to your full satisfaction, please fill in the appropriate box, sign, and date the letter, and return it to school.

Signed: ___________________________________________(Authorized Representative of Principal Investigator)

I_ I Yes, I consent to be interviewed.

I_ I No. I do not consent to be interviewed.

Signed: ______________________ Date: ________

(Parent)
APPENDIX K

LETTER TO PARENTS INCLUDING TENTATIVE INTERVIEW QUESTIONS
May 22, 1990

Dear Mr. and Mrs. Smith,

In my questions, I'll ask you to remember some examples of things that you and Caroline have said and done. It may be hard to remember them on the spur of the moment, so here are some of the questions, in case you'd like to think about them in advance:

* Do you ever hear Caroline talk with her friends about schoolwork?
* Has she gotten you into any conversations about something she was learning?
* Have you ever seen her take something she did or learned at school and (a) go further with it or (b) use it for something in real life?
* Has she ever asked you to buy her something because she was interested in it from school?
* Have you ever bought something for her, without being asked, because you felt it would support her schoolwork?

* What seems to turn her on most about school?
* What seems to turn her off most about school?
* Is there anything that happens in her class that either encourages or hinders her getting involved in work?

* Can you think of home activities or family trips that seem to have a continuing influence on the things she thinks about or does?
* Have you ever seen evidence, especially this year, that something she saw on TV or in a movie was reinforcing something she had learned in school?
* Have you ever known Caroline to be particularly interested in something in school because she already had experience with it outside of school.

* What differences do you think there are in Caroline at home and at school?

Thank you. See you tomorrow.

[Signature]
APPENDIX L

ACTIVITY CHRONICLE
Activity Chronicle

C = Conversation -- Talking with someone

TH = Thinking about something

HJ = Homework

J = doing a Job or chore -- something your parents or adults in charge say you have to do

M = Making

W = Writing > something on your own -- could be for school,

R = Reading / but not something a teacher or parent told you to do

PI = Playing Inside

PO = Playing Outside

TV = sitting down and watching TV or VCR

L = sitting down and Listening to music, radio, or a story

E = Eating a meal

S = going to a Store or Shopping

Z = Sleeping or in the bathroom

X = anything we left out -- Explain.

If you have done a second activity in the same half hour, you may write a small letter next to the first one. For example: TV r
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>What?</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00</td>
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<tr>
<td>9:30</td>
<td></td>
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<td>10:00</td>
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<td>10:30</td>
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<td>11:00</td>
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<td>11:30</td>
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<tr>
<td>12:00</td>
<td></td>
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<tr>
<td>12:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00</td>
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<td>1:30</td>
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<tr>
<td>2:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Day** 3-5-90 Mon.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>What?</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30</td>
<td>Play with Jack and Mom</td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td>Make Games up</td>
<td></td>
</tr>
<tr>
<td>4:30</td>
<td>&quot;Adventure Games&quot; at house</td>
<td></td>
</tr>
<tr>
<td>5:00</td>
<td>&quot;Adventure Games&quot;</td>
<td></td>
</tr>
<tr>
<td>5:30</td>
<td>Eat in tree house</td>
<td></td>
</tr>
<tr>
<td>6:00</td>
<td>Homework, math, chore, dr</td>
<td></td>
</tr>
<tr>
<td>6:30</td>
<td>Mom cooks dinner</td>
<td></td>
</tr>
<tr>
<td>7:00</td>
<td>Eat dinner today</td>
<td></td>
</tr>
<tr>
<td>7:30</td>
<td>Listening to radio</td>
<td></td>
</tr>
<tr>
<td>7:40</td>
<td>Listening to radio</td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td>Who is the Boss</td>
<td></td>
</tr>
<tr>
<td>8:30</td>
<td>Volley</td>
<td></td>
</tr>
<tr>
<td>9:00</td>
<td>For school</td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td>Bath room get ready</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Read Bible/Sleep</td>
<td>&quot;Sleep&quot;</td>
</tr>
<tr>
<td>10:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parent or Guardian's Signature

I believe this information is quite accurate.
APPENDIX M

QUESTIONNAIRE OF STUDENT OPINIONS ABOUT CLASSROOM
QUESTIONS ABOUT CLASS

1. Noise bothers me in this room [ ] a lot.
   [ ] a little.
   [ ] not at all.

2. Noise bothers me in this room when ____________________________

3. The noise usually comes from ____________________________

4. In circle [ ] I can usually hear the person who is speaking.
   [ ] I sometimes can't hear the person who is speaking.
   [ ] I can't hear very much.

5. Have you done any ideas from camp lately on your own? _______

6. Have you checked out the book Blood and Guts from the library? __

7. Are our ancient cultures activities really schoolwork? _______

8. The work I have to do in this class is [ ] usually too easy.
   [ ] usually too difficult.
   [ ] usually just about right.

9. In here, the teachers usually give [ ] too much time to finish.
   [ ] not enough time to finish.
   [ ] the right amount of time.

10. In here, do you do things that you are interested in? [ ] Yes, a lot of things.
    [ ] Yes, some things.
    [ ] Only a little.

11. Should people have assigned seats? And why? ______________________

12. In our area there is [ ] plenty of room.
    [ ] just enough room.
    [ ] not enough room.

13. To make this class better, I think ________________________________
APPENDIX N

QUESTIONNAIRE ABOUT THE SCIENCE FAIR
ABOUT THE SCIENCE FAIR

1. "I wanted to do a science fair project because ____________________________
   ____________________________

2. "I did not want to do a science fair project because ____________________________
   ____________________________

3. What did you do with your project after the fair? ____________________________
   ____________________________

4a. Since the day of the science fair, have you still been thinking about your project? I__ YES I__ NO

4b. Since the day of the science fair, what have you been thinking about your project? ____________________________
   ____________________________

5a. After the fair, have you done anything that was sort of the same idea as your project? I__ YES I__ NO

5b. What have you done? ____________________________
   ____________________________

5c. Did anyone suggest or tell you to do it? Who? ____________________________

5d. Why did you do it? ____________________________
   ____________________________

6a. Since the fair, have you thought about anyone else's projects? I__ YES I__ NO

6b. Whose projects? ____________________________

6c. Since the fair, have you done anything that was sort of from someone else's project? I__ YES I__ NO

6d. Whose project? ____________________________

6e. And what did you do? ____________________________
APPENDIX O

GUIDING QUESTIONS FOR CO-OBSERVERS
Classroom Observation

Look and listen for currents in this environment—moods, demands, reasons, interests. Consider not just the words spoken but what they seem to mean in the context of the actions and circumstances that accompany them. Prepare to be descriptive. Interpret according to your own personal experience. You might see important things other than those implied below.

- - - - - - - - -

Are there choices? Demands? Things decided (either in advance or on the spot) by the teacher? Decisions left up to students?

Any indications—from teacher or students—of reasons for students doing their work? For the good or enjoyment in it? For some near or distant reward?

Any circumstances/conditions that make a task more attractive or less attractive to a pupil?

Anyone turned off or turned on? Any hints that some kids might continue something on their own, after the required work is completed?
Classroom Observation II

1a. Consider what the teacher expresses/exudes/indicates to pupils in his interactions with them, especially his feedback to them. Do you note interactions that are informational or controlling?

1b. Do you notice any indications from students that they feel a sense of self-determination—a feeling of power over one’s own actions (no matter whether you judge that they actually do have power or not)? Do you see any indications that students feel constrained, hemmed in, controlled?

2. Do you notice any indications from students that they feel competent or incompetent at what they are doing? Does the challenge of a task seem too little, too great, or just right?

3. Do you notice indications that students are relating their tasks to their own past experience or culture?

4. What appears to be attracting or pushing pupils toward their work?

5. Who is investing in his/her work? Who is not? In what ways? (Investment includes: eagerness, questioning or talking or arguing about the subject matter, intensity, persisting after time is up, going back during free time, asking for more, doing high quality work.)
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